SANTA CRUZ COUNTY

9974 Central Coast Site Strategies

9974.1 Santa Cruz County

SITE SUMMARY SHEET

SITE: CC-001-A **Waddell Creek Inlet and Beach** Ospr Map No. 062

County: Santa Cruz Lat.
USGS 7.5' Quad: Ano Nuevo Long.

SITE DESCRIPTION:

Minor fringing marsh beneath Route 1 and a well-developed marsh inland of the bridge.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Waterfowl (e.g. Mallards and Scoters), shorebirds (e.g. threatened Snowy Plovers and Sanderlings), and coastal seabirds including the endangered Brown Pelican. This anadromous stream provides habitat for Steelhead Trout, Tidewater Goby (candidate species), Coho Salmon (candidate species), and the endangered San Francisco Garter Snake. Locally rare plant species include Erysimum franciscanum, Agrostis californica, and Microserus decepiens.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

California Dept. of Parks and Recreation (831) 649-2810
Suzanne Smith, Santa Cruz Co. Resource Planner (831) 454-3162
Dave Hope, Santa Cruz County Resource Planner (831) 454-3096

REMARKS:

Site of Big Basin Redwoods State Park and Waddell Beach (recreational use).

Site Strategy
Site: CC-001-A Waddell Creek Inlet and Beach

PROTECTION STRATEGY:

Block entrance (area just seaward of Highway 1 bridge) with sediment dike (fine-grained sand). Oil must be prevented from flowing under Highway 1 bridge and entering the marsh system. Note: Sediment may be scarce following severe storms.

COLLECTION POINTS:

On south beach, seaward of sediment dike.

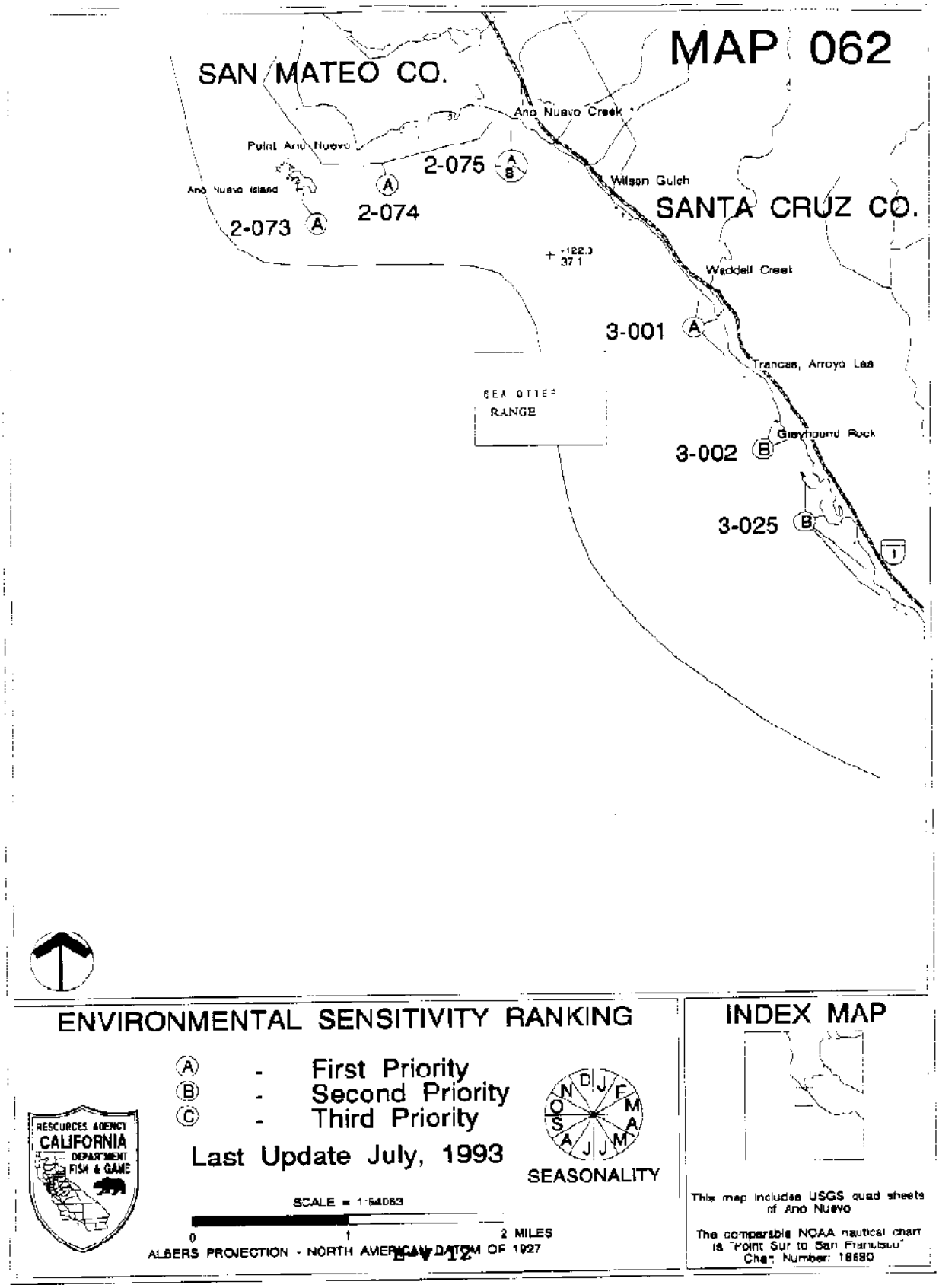
ACCESS TO AREAS:

From Santa Cruz, take Highway 1 north. Access directly from highway, 7.1 miles north of railroad crossing (just north of Davenport).

RECOMMENDED RESOURCES:

(See Appendix I to Annex F)

	Type	Length
BOOM:	N/A	
SKIMMER:	N/A	


MAP 062
SAN MATEO CO.
Ano Nuevo Creek
Point Ano Nuevo
Ano Nuevo Island
2-075
2-074
2-073
Wilson Gulch
SANTA CRUZ CO.
Waddell Creek
3-001
Trances, Arroyo Las
SEA OTTER
RANGE
Greyhound Rock
3-002
3-025
ENVIRONMENTAL SENSITIVITY RANKING
A - First Priority
B - Second Priority
C - Third Priority
Last Update July, 1993
SEASONALITY
RESOURCES AGENCY
CALIFORNIA
DEPARTMENT
FISH & GAME
SCALE = 1:54053
0
2 MILES
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927
INDEX MAP
This map includes USGS quad sheets of Ano Nuevo
The comparable NOAA nautical chart is "Point Sur to San Francisco"
Chart Number: 18680

INLET SKETCH MAP

Inlet Name WADDELL CREEK INLET, CA.

Recorder(s) MPH/TMM/KM

Date/Time 9 NOV. 1992; 0710

Tide Stage HIGH (~0236 LST); AÑO NUEVO

Inlet Classification D

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

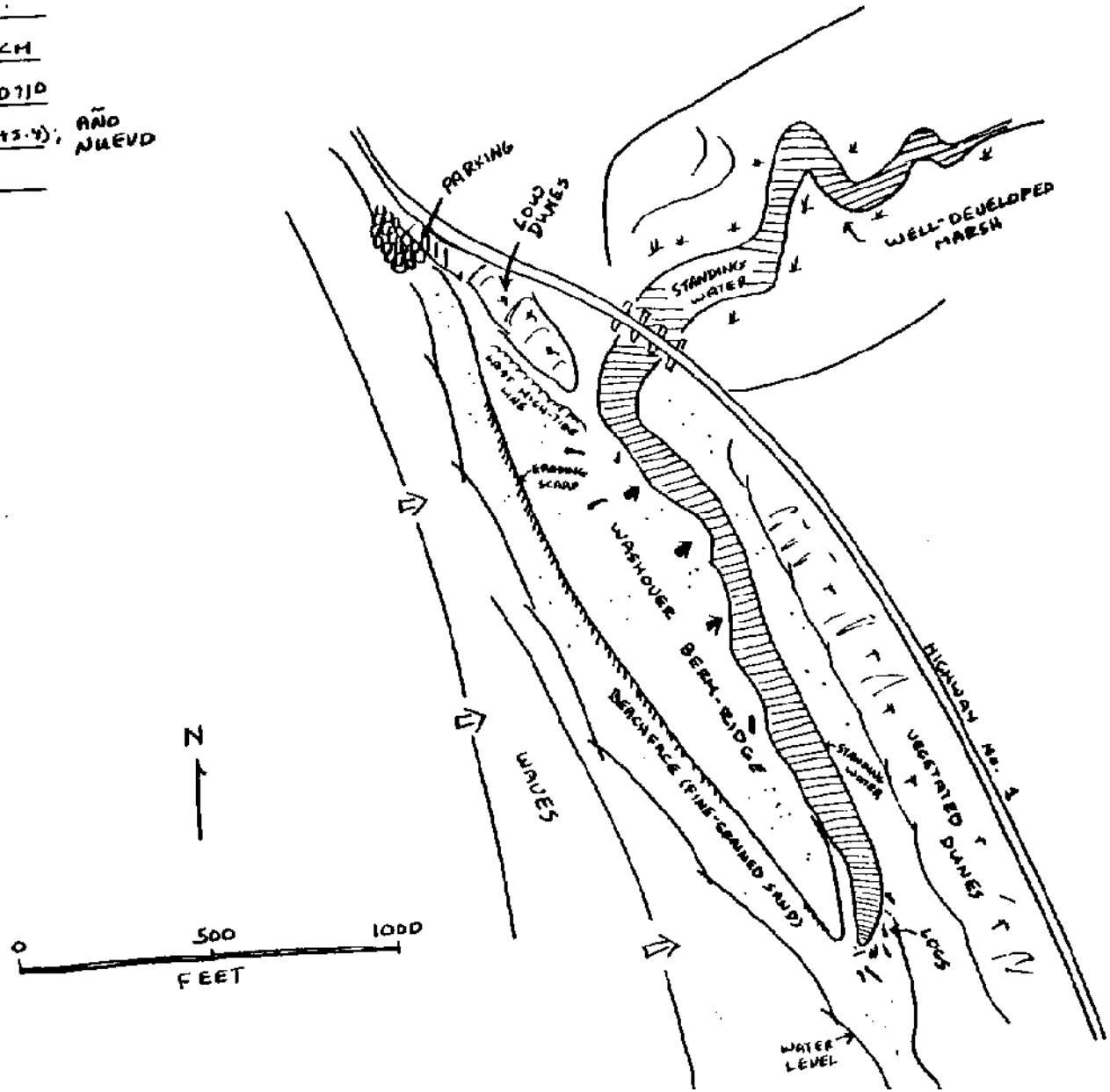
Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



Central Coast
Santa Cruz County
9974.1-6

SITE SUMMARY SHEET

SITE: CC-002-B **Greyhound Rock, and inland** (west of parking area)

Ospr Map No. 062

County: Santa Cruz

Lat. 37 04'

USGS 7.5' Quad: Ano Nuevo

Long. 122 16'

SITE DESCRIPTION:

Offshore rock.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Pacific Harbor Seal and Elephant Seal haul-out site. 500 mammals have been observed offshore. Inland is the locally rare plant Erysi-mum fransiscanum.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Santa Cruz County Open Space and Cultural Services (831) 462-8300
Suzanne Smith, Santa Cruz Co. Resource Planner (831) 454-3162

REMARKS:

State owned (Department of Fish and Game) - leased by Santa Cruz County

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-003-A/B **Scott Creek Inlet and Molino Creek Inlet** Ospr Map No. 063

County: Santa Cruz Lat.
USGS 7.5' Quad: Davenport Long.

SITE DESCRIPTION:

Exposed sandy beach approximately 1 mile long. Small pond/lagoon/marsh behind beach and well-developed marsh inland of Route 1.

SEASONAL CONCERNS:

Birds and gobies present year round. Moderate to heavy waterfowl use during migratory season.

RESOURCES OF PRIMARY CONCERN:

Shorebirds and coastal seabirds, include endangered Brown Pelican, Snowy Plover (threatened), saltmarsh common yellowthroat and tricolored blackbird. San Francisco garter snake (endangered) are present. Tidewater goby (candidate species), native coho salmon (candidate species) and steelhead trout found in the creek. Peregrine Falcons, listed as endangered. Plant species of concern (CNPS): Within the coastal bluff scrub communities: Michael's piperia (Piperia michaelii). Rhinoceros Auklets (Cororhinca monocerata), a state listed species of special concern, utilize the northernmost cliffs.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Dave Hope, Santa Cruz County Resource Planner (831) 454-3096

REMARKS:

Snowy Plover nesting area is a county restoration project which limits access due to habitat restoration.

Site Strategy
Site: CC-003-A Scott Creek Inlet

PROTECTION STRATEGY:

Block inlet with sediment dike. Stockpile of medium to fine-grained sand located to the southeast of creek mouth.

COLLECTION POINTS:

On south beach, seaward of sediment dike.

ACCESS TO AREAS:

Take Highway 1 north from Santa Cruz. Access directly off of highway, 2.3 miles past the railroad crossing (just north of Davenport).

RECOMMENDED RESOURCES:

(See Appendix I to Annex F)

	Type	Length
BOOM:	N/A	
SKIMMER:	N/A	

Site Strategy
Site: CC-003-A Molino Creek Inlet

PROTECTION STRATEGY:

Block inlet with sediment dike (medium to fine-grained sand).

COLLECTION POINTS:

In small inlet at southern edge of southern beach, seaward of sediment dike. NOTE: Inlet only flows at high tide.

ACCESS TO AREAS:

From Santa Cruz, take Highway 1 north, 2.3 miles north of railroad crossing (just north of Davenport).

RECOMMENDED RESOURCES:

(See Appendix I to Annex F)

	Type	Length:
BOOM:	N/A	
SKIMMER:	N/A	

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-004-A/B **Terrace Point/ Younger Lagoon**

Ospr Map No. 063

County: Santa Cruz

Lat.

USGS 7.5' Quad: Santa Cruz

Long.

SITE DESCRIPTION:

Coarse sandy beach protects lagoon. Bar is known to breach during sufficient rainfall events each year (three times in 1993 and once in1994). Moderate-size dunes present.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Shorebirds and coastal seabirds. Local breeding Cormorants known to roost on cliff. Lagoon heavily used by waterfowl.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Steve Davenport, Long Marine Lab UCSC (831) 459-2883 (M)
Keith Johnson, Long Marine Lab UCSC (831) 459-2883 (M)

REMARKS:

Lagoon and surrounding area managed by the University of California

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-005-A/B **Laguna Creek Inlet & Beach** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Well developed marsh inland of sand spit. One of the most diverse estuaries in the country.

SEASONAL CONCERNS:

Birds present year round; Steelhead trout present winter, spring and fall.

RESOURCES OF PRIMARY CONCERN:

Coastal sea birds including brown pelicans (endangered); abundant shorebirds including western snowy plover (threatened). Coho salmon (candidate species), steelhead trout and perhaps tidewater goby (candidate species) in creek. The federally listed rare San Francisco tree lupine moth is found in the coastal scrub plant community. Blasdale's bent grass (Agrostis Blasdalei) and Michael's piperia (Piperia michaelii), plant species bluff scrub community.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Private ownership. County owns easement.
County Resource Planner (831) 454-3096

REMARKS:

Plovers last seen 1987 (NDDB). Gobies last seen in 1984. Possibly extirpated. None seen in 1990, possibly due to drought (NDDB).

Site Strategy
Site: CC-005-A Laguna Creek Inlet

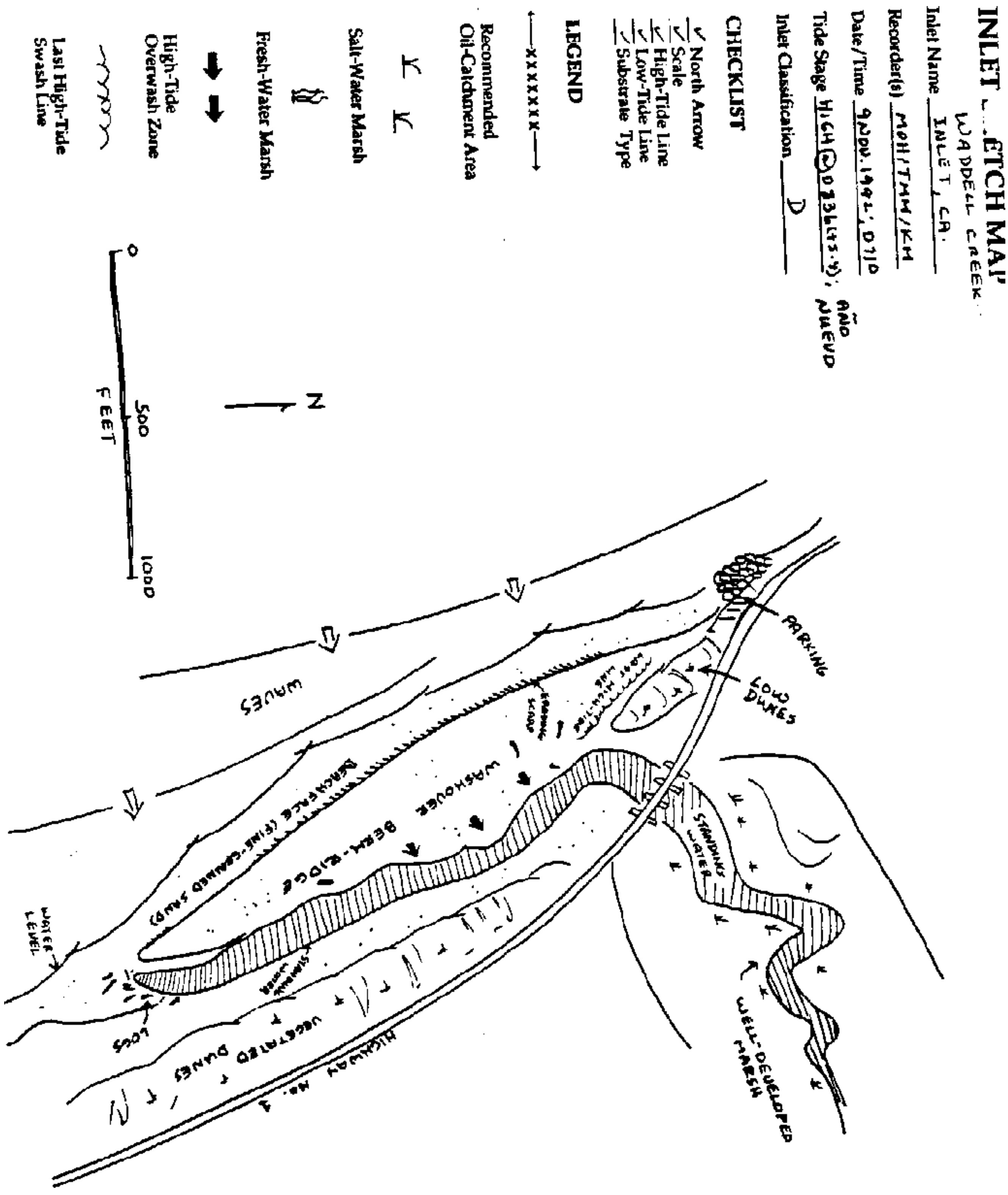
PROTECTION STRATEGY:
Close off the overwashed inlet mouth with a sediment dike (medium-grained sand).

COLLECTION POINTS:
On south beach, seaward of sediment dike. NOTE: No vehicle access to collection area. Personnel and bulldozer can access inlet area by steep sand hill near railroad tracks.

ACCESS TO AREAS:
From Santa Cruz, take Highway 1 north. Pass the Baldwin Creek and Majors Creek Inlets. Laguna Inlet is directly seaward of Bonnie Doon Road. Park in the off highway parking area just south of Bonnie Doon Road. Walk up the hill and cross over the railroad tracks.

RECOMMENDED RESOURCES:
(See Appendix I to Annex F)

	Type	Length
BOOM:	N/A	
SKIMMER:	N/A	



Central Coast
Santa Cruz County
9974.1-17

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-006-A/B **Majors Creek Inlet** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Majors Creek Inlet/Red, White, and Blue Beach. Medium/coarse sandy grain beach. Creek empties on west side of the beach. Washover terrace present and modest marsh in channel behind beach. Private access/campground.

SEASONAL CONCERNS:

Birds present year round; Steelhead Trout present winter, spring and fall.

RESOURCES OF PRIMARY CONCERN:

Coastal sea birds including Brown Pelicans (endangered) and Cormo-rants. Black Swift (CDFG species of special concern). Sea Otters may be present. Steelhead Trout in creek. There is a locally rare plant, Erysimum fransicanum in the area.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Suzanne Smith, Santa Cruz Co. Resource Planner (831) 454-3162
California Department of Parks and Recreation (831) 649-2810

REMARKS:

Private ownership (Beach and Campground). Private access. Campground. Black Swift nest (elevation 20 ft.) located in seacave in a rocky coastal cliff above “second cave” in SE side of Sand Hill Bluff. Nest built of Enteromorpha algae (NDDB).

Site Strategy
Site: CC-006-A Majors Creek Inlet

PROTECTION STRATEGY:

Close off inlet with sediment dike (medium-grain sand).

COLLECTION POINTS:

Access for personnel only. Vehicles can be driven to within 1/4 mile of inlet mouth. On south beach, seaward of sediment dike. NOTE: there is no entrance point for heavy equipment.

ACCESS TO AREAS:

Access road to beach is private. From Santa Cruz, take Highway 1 north, past Wilder Creek and Baldwin Creek. Turn left on first road past Coast Road (approximately 1 mile). Cross the railroad tracks and turn left onto dirt road paralleling railroad tracks. Turn right onto dirt road with yellow closure bar/gate. Continue onto farm field skirting road.

SITE SUMMARY SHEET

SITE: CC-007-A/B **Baldwin Creek Inlet Four Mile Beach** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:
Medium/coarse sandy beach. Heavily used by surfers. Modest marsh in channel behind beach. Northern Boundary of Wilder Ranch, common name - Four Mile Beach.

SEASONAL CONCERNS:
Year round.

RESOURCES OF PRIMARY CONCERN:
Coastal sea birds including Brown Pelicans (endangered), Cormorants, and Snowy Plover. Sea Otters may be present. Tidewater Goby (candidate for federal listing) and Steelhead trout in the creek (NDDB).

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERT :
CA Department of Parks and Rec. (831) 649-2810 (24 hour)

REMARKS:
Gobies last seen in 1984. Possibly extirpated. None observed in1990, possibly due to drought.

Site Strategy
Site: CC-007-A Baldwin Creek Inlet

PROTECTION STRATEGY:
Close off inlet with sediment dike (medium-grained sand). Note: Sand may be scarce during erosional episodes.

COLLECTION POINTS:
On south beach, seaward of sediment dike.

ACCESS TO AREAS:
Access is difficult. From Santa Cruz, take Highway 1 north (towards Half Moon Bay), approximately 4 miles. Turn left onto Coast Road. Turn at your first right into private driveway (5515 Coast Road). Cross railroad tracks and turn left onto dirt road. Veer right into farm field and turn right onto field skirting road. Drive approximately 1/4 mile. Inlet is on the right. NOTE: Farm roads are soft plowed dirt.

RECOMMENDED RESOURCES:
(See Appendix I to Annex F)

	Type	Length
BOOM:	N/A	
SKIMMER:	N/A	

SITE SUMMARY SHEET

SITE: CC-008-A **Wilder Creek Inlet and Beach** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Modest marsh in channel behind beach.

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

Wilder Creek Natural Preserve. Coastal sea birds including Brown Pelicans (endangered) and Cormorants; shore birds including Western Snowy Plovers (threatened), one of the largest populations in the state. Snowy Plover nesting area. Sea Otters may be present. Steel-head trout.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

CA Dept. Parks & Rec. - Wilder Ranch State Park (831) 649-2810

REMARKS:

Emergency access only. Contact Trustee.

Site Strategy
Site: CC-008-A Wilder Creek Inlet

PROTECTION STRATEGY:
Close off inlet with sediment dike (medium-grained sand). Note: Sand may be scarce during erosional episodes.

COLLECTION POINTS:
On south beach, seaward of sediment dike. NOTE: Areas around beach are high cliffs with few, if any, trails down to the beach.

ACCESS TO AREAS:
Access is difficult**.** From Santa Cruz, take Highway 1 north (towards Half Moon Bay). Turn left at Wilder Ranch State Park. Follow this road to the park Headquarters and ask for further access directions.

RECOMMENDED RESOURCES:
(See Appendix I to Annex F)

	Type	Length
BOOM:	N/A	
SKIMMER:	N/A	

SITE SUMMARY SHEET

SITE: CC-009-A/B **Moore Creek/ Natural Bridges State Park**

Ospr Map No. 064

County: Santa Cruz

Lat.

USGS 7.5' Quad: Santa Cruz

Long.

SITE DESCRIPTION:

Natural Bridges Beach State Park/Moore Creek. Sandy beach and sand-stone bluffs. Rocky platforms located at southwest and arch rock formation on east corner. Moore Creek drains into small Marsh on west side, creek mouth to 0.25 mile upstream. Rocky intertidal region adjacent to beach. Resident dwellings nearby.

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

Western Snowy Plovers (threatened), Brown Pelicans endangered), Black Swifts (CDFG species of special concern), and Tidewater Goby (candidate for federal listing).

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

California Dept. Parks & Recreation (831) 649-2810 (24 Hour)

REMARKS:

High recreation use. Black Swift nest in sea cave in a rocky coastal cliff (elevation 20 ft.) last seen 1988 (NDDB). Gobies possibly extirpated. None observed in 1990 possibly due to drought (NDDB).

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-010-A **San Lorenzo River Inlet** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

River mouth maintained as dredged flood-control channel. Open water and sand flats within tidal prism serve as resting habitat for birds and ripardian wildlife.

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

Coastal seabirds including Brown Pelicans (endangered); shorebirds. Sea Lions also present. Anadromous stream with Coho Salmon and Steelhead Trout.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERT :

City of Santa Cruz (831) 429-3616

REMARKS:

Site of Santa Cruz Beach, high recreational use.

Site Strategy
Site: CC-010-A San Lorenzo River Inlet

PROTECTION STRATEGY:
During optimal conditions (extremely low discharge and moderate surf), every attempt should be made to block entrance to inlet with a sediment dike. Should the dike fail, or conditions not allow dike construction, a series of deflection booms should be employed to divert oil to sandy west bank of river (or east bank if more desirable).

COLLECTION POINTS:
A skimmer should be placed in the channel, inland of primary and secondary diversion booms, in the event that entrainment occurs during flood tides. Vacuum trucks equipped with duck-billed skimmers should be placed on west (or east) shore of river at collection points of primary and secondary diversion booms.

ACCESS TO AREAS:
From Santa Cruz, take Highway 1 south to Ocean Avenue off ramp. Follow Ocean Avenue 2 miles and turn right onto San Lorenzo Boulevard. Turn left onto Riverside Avenue. Turn left onto Beach Street, and follow it into the Amusement Park parking lot. Access east bank through Amusement Park via Boardwalk. Beach is hard and trafficable.

RECOMMENDED RESOURCES:
(See Appendix I to Annex F)

	Type	Length
BOOM:	18" harbor	800'

	Type	Number
SKIMMER:	Self-propelled	1
	Duck-bill head	2

INLET SKETCH MAP

SAN LORENZO RIVER

Inlet Name INLET, CA.

Recorder(s) MDH/TMM/KM

Date/Time 8/10/1992; 1615

Tide Stage LOW @ 1510 (-0.2) SANTA CRUZ

Inlet Classification B

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

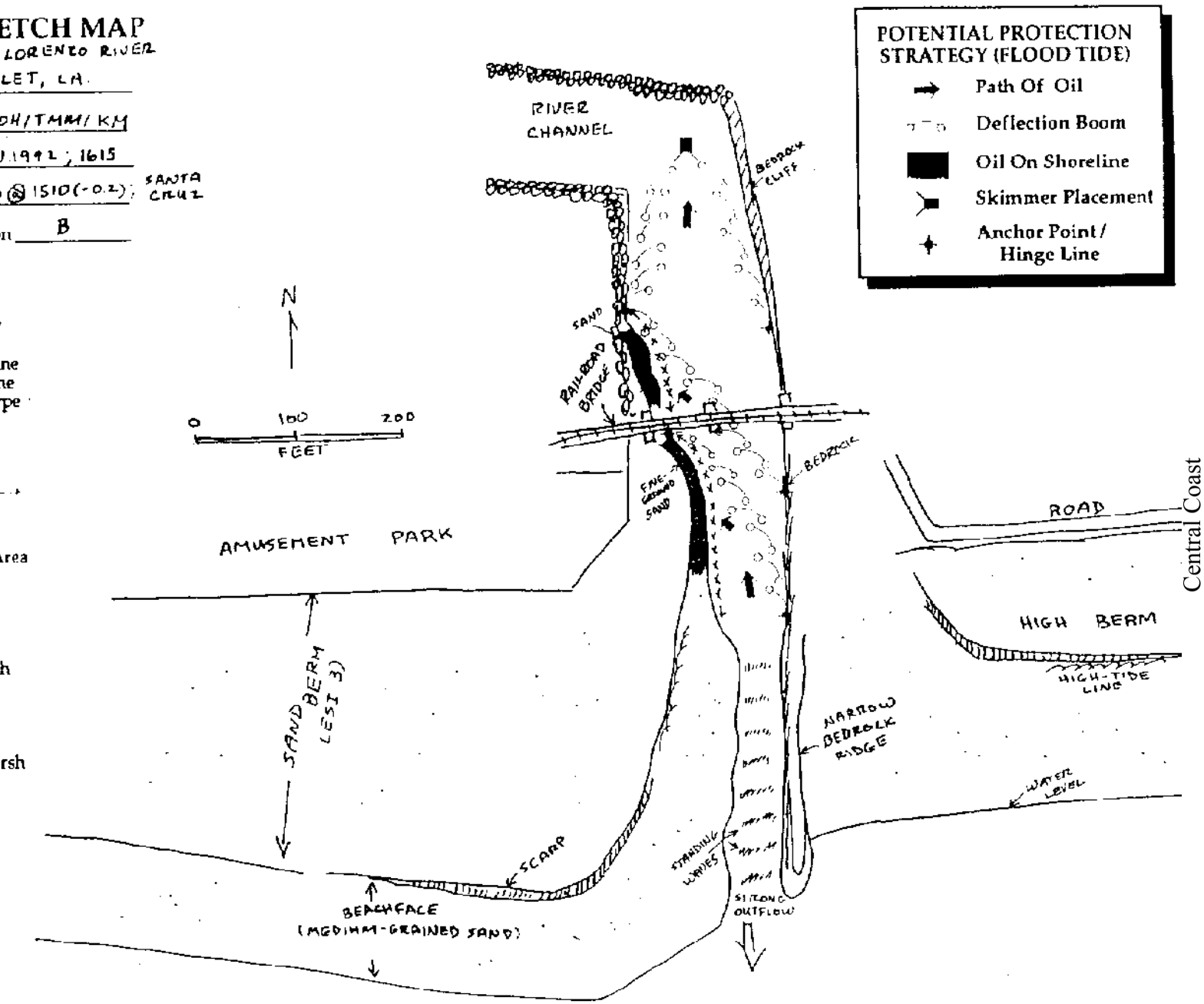
Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



Central Coast
Santa Cruz County
9974.1-29

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-011-A **Santa Cruz Municipal Wharf & Santa Cruz Beach** Ospr Map No. 064

County: Santa Cruz Lat.

USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Long wharf and fishing piers with beach areas on either side. Rocky cliffs short distance away on upcoast side. Area of high recreational use.

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

Haulout for moderate numbers of California Sea Lions. Brown Pelicans (endangered), and Black Swifts (CDFG species of special concern) nest here.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

City of Santa Cruz (831) 429-3616

REMARKS:

Coast Guard Reserve Lifeguard Headquarters located on the pier.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-012-B **Point Santa Cruz/ Lighthouse Field State Beach** Ospr Map No. 064

County: Santa Cruz Lat.

USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Rocky headland and small pocket beaches.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Haulout for moderate numbers of California Sea Lions. Endangered Brown Pelicans (endangered), and Black Swifts (DFG species of special concern) nest here.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

City of Santa Cruz (831) 429-3616

REMARKS:

Steamer's Lane Important, high use surfing area Lighthouse Field.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-013-B **Santa Cruz Harbor Entrance** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5" Quad: Santa Cruz Long.

SITE DESCRIPTION:

Santa Cruz Harbor entrance (also known as Woods Lagoon).

SEASONAL CONCERNS:

Year round

RESOURCES OF PRIMARY CONCERN:

Coastal seabirds including Brown Pelicans (endangered) and Cormorants; shore birds including Plovers and Sandpipers. Sea Otters may be present.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Santa Cruz Harbor (831) 475-6161.

REMARKS:

Site Strategy
Site: CC-013-A Santa Cruz Harbor Entrance (Woods Lagoon)

PROTECTION STRATEGY:
If wave conditions permit, establish deflection booms across the entrance to the harbor and divert oil to the wide, medium-grained sand beaches just east and west of the jetties.

PERSONNEL REQUIRED:
Utilize 6 people to operate skimmers/vacuum trucks, a 3 person boat crew, and 6 people to deploy and tend boom.

INLET SKETCH MAP

SANTA CRUZ HARBOR

Inlet Name ENTRANCE, CA.

Recorder(s) MDH/TMM/KM

Date/Time 8 NOV. 1992; 1540

Tide Stage LOW @ 1510 (-0.2), SANTA CRUZ

Inlet Classification B

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

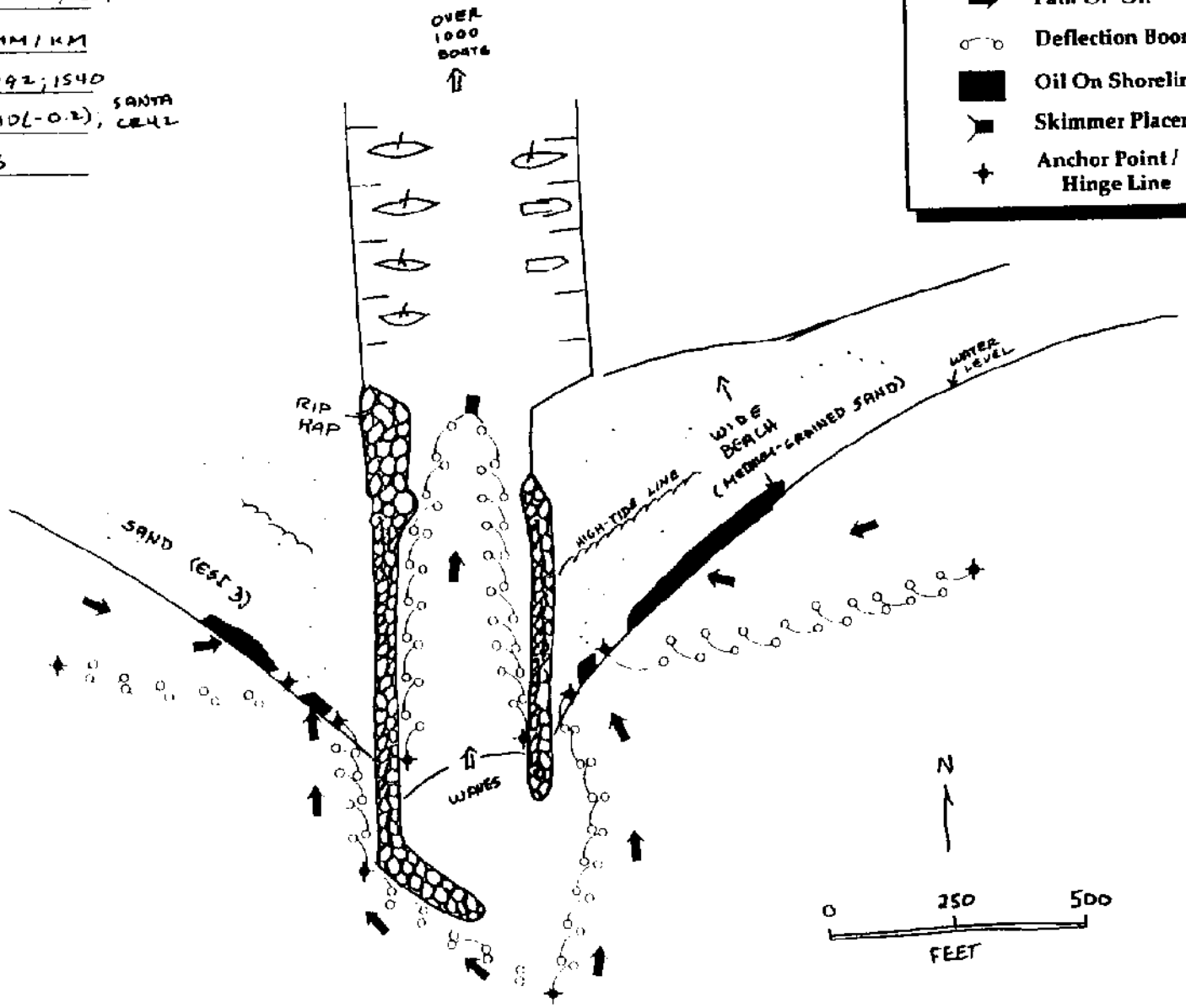
XXXXXXX — Recommended Oil-Catchment Area

✓ ✓ — Salt-Water Marsh

Fresh-Water Marsh

→ → — High-Tide Overwash Zone

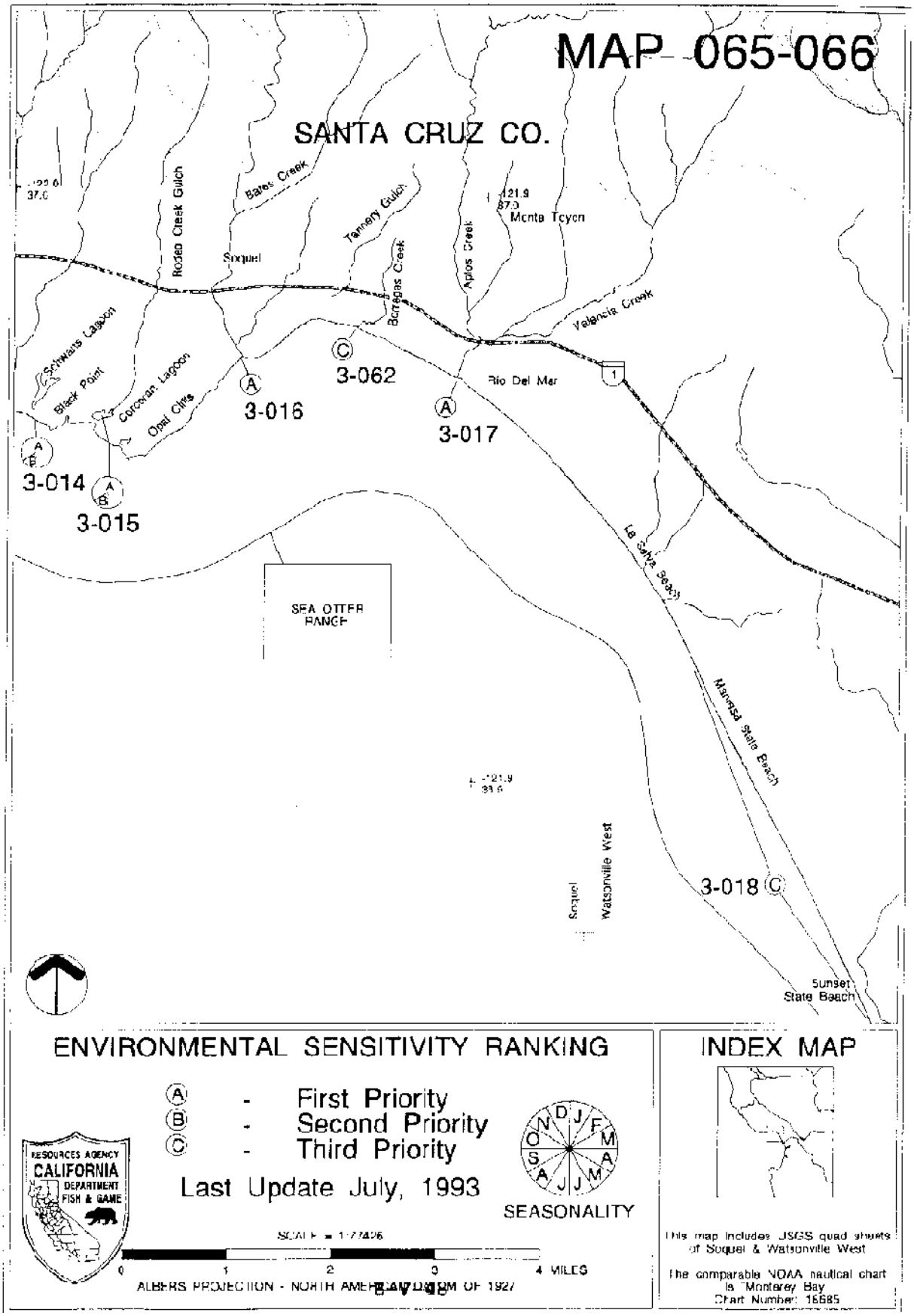
Last High-Tide Swash Line



POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- Skimmer Placement
- Anchor Point / Hinge Line

Santa Cruz County
9974.1-37


MAP 065-066
SANTA CRUZ CO.
Rodeo Creek Gulch
Bates Creek
Soquel
Tannery Gulch
Borregas Creek
Aptos Creek
Monta Tcyon
Valencia Creek
Schwans Lagoon
Black Point
Corcoran Lagoon
Opal Cliffs
Rio Del Mar
3-014
3-015
3-016
3-062
3-017
SEA OTTER RANGE
Manresa State Beach
Watsonville West
3-018
Sunset State Beach
ENVIRONMENTAL SENSITIVITY RANKING
A - First Priority
B - Second Priority
C - Third Priority
Last Update July, 1993
RESOURCES AGENCY
CALIFORNIA
DEPARTMENT FISH & GAME
SEASONALITY
0 1 2 3 4 MILES
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927
INDEX MAP
This map includes USGS quad sheets of Soquel & Watsonville West
The comparable NOAA nautical chart is Monterey Bay
Chart Number: 18685

SITE SUMMARY SHEET

SITE: CC-014-A/B **Schwan's Lake Inlet** Ospr Map No: 065

County: Santa Cruz Lat.
Long.

SITE DESCRIPTION:

Freshwater marsh inland of bridge with a minor fringing marsh on the seaward side of bridge. This is a B priority during summer months

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

Shore birds and coastal sea birds including brown pelicans (endangered) and double-crested cormorants(winter roosting area).

TRUSTEE/MANAGER/LOCAL EXPERTS:

Ca Dept. of Parks and Recreation (831) 649-2810
Suzanne Smith, Santa Cruz Co. Resource manager (831) 454-3162

REMARKS:

Site of Twin Lakes State Beach, high recreational use.

Site Strategy
Site: CC-014-A Schwan's Lake Inlet

PROTECTION STRATEGY:
Block entrance with 500 foot sediment dike. Medium-grained sand available seaward of culverts. Plug up three culverts to prevent oil from flowing into the lagoon. During severe storm-surge conditions, the sediment dike should be built to a height to prevent water into the entrance, establish deflection booms along each jetty in order to divert oil to skimmers. Set up deflection booms to divert any oil coming onshore (from east or west) to the medium-grained sand beaches that flank the jetties. Flood currents should be relatively weak.

COLLECTION POINTS:
Deflect oil to beaches east and west of the jetties. Oil within the harbor should be diverted to skimmers.

ACCESS TO AREAS:
From Santa Cruz, take Highway 1 south to Soquel Drive off ramp. Turn right onto Soquel Avenue. Head west on Soquel Avenue 2 stoplights and turn left onto 7th Avenue. Follow 7th Avenue to the beach. Schwan Lake is a left turn at beach (Portola Drive).

RECOMMENDED RESOURCES:
(See Appendix I to Annex F)

	Type	Length
BOOM:	18" harbor	1300
	24" open water	2600
SKIMMER:	Self propelled 1	

INLET SKETCH MAP

SCHWANS LAGOON

Inlet Name INLET, CA.

Recorder(s) MOH/TMM/KM

Date/Time 8 NOV 1992 ; 1520

Tide Stage LOW @ 1510 (-0.2)

Inlet Classification D

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

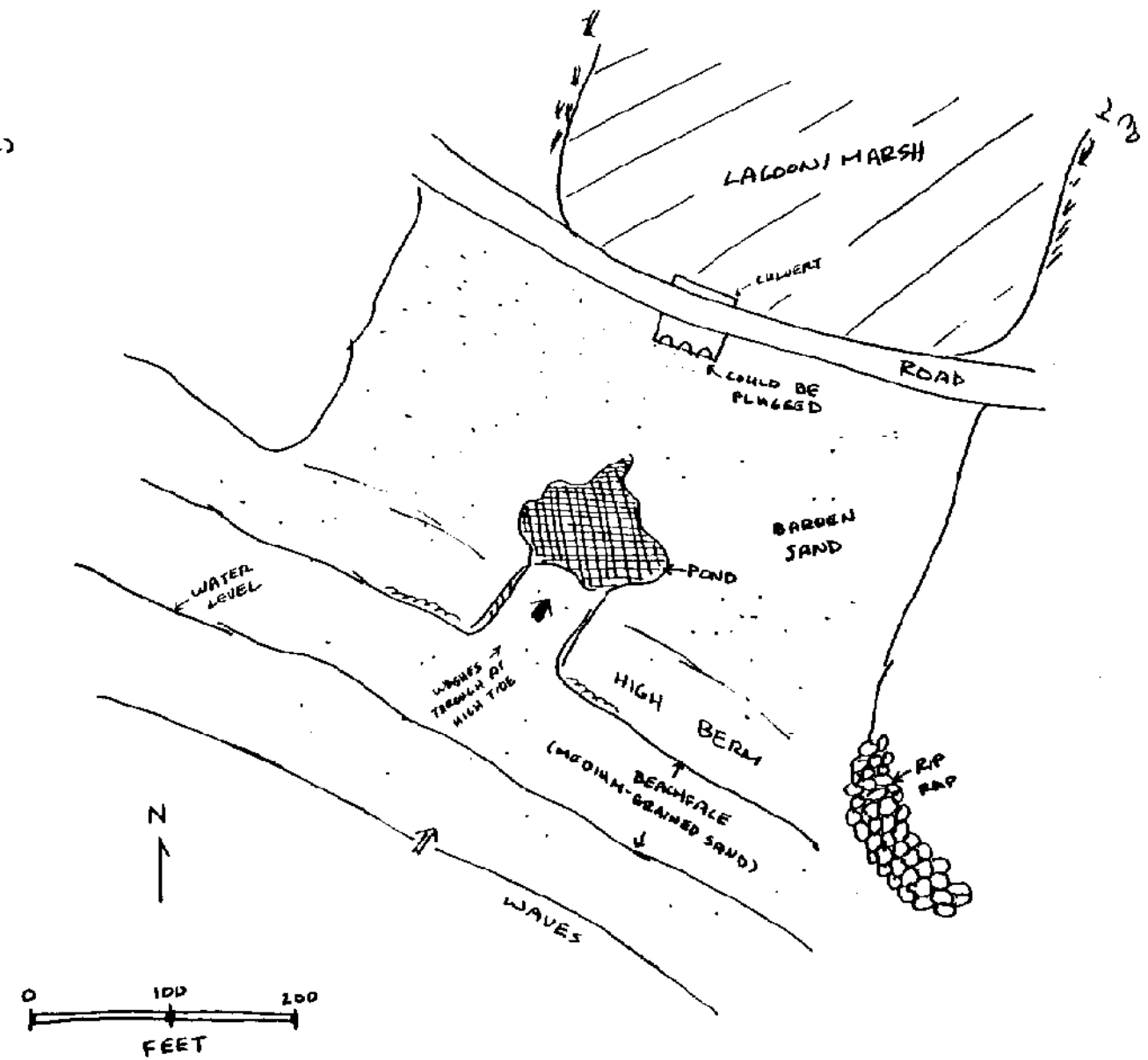
Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



Central Coast
Santa Cruz County
9974.1-41

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-015-A/B **Corcoran Lagoon Inlet (Rodeo Creek Inlet)** Ospr Map No. 065

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Lagoon inland of inlet.

SEASONAL CONCERNS:

Species of concern discussed below are present year round. This is a B priority during summer months (i.e. during periods of low or no flow, or lower tides)

RESOURCES OF PRIMARY CONCERN:

Shore birds and coastal sea birds including cormorants, brown pelicans (endangered), pied-billed grebes and buffleheads. Littleneck clams on sandy beach. Tidewater goby (candidate for federal listing) inhabits the creek.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Private marsh.

REMARKS:

Site Strategy
Site:CC-014-A/B Corcoran Lagoon Inlet (Rodeo Creek Inlet)

PROTECTION STRATEGY:
Close off with a 300' sediment dike (medium-grained sand). It may be difficult to close inlet after period of prolonged erosion or during periods of high runoff.

COLLECTION POINTS:
On southeast beach, seaward of sediment dike. Access from 21st Avenue Dead End.

ACCESS TO AREAS:
From Santa Cruz, take Highway 1 south to Soquel Drive off ramp. Turn left onto 17th Avenue and turn/veer right on 17th Avenue (to stay on 17th). Continue straight onto Cliff Drive. Cliff Drive runs over the Rodeo Creek Inlet at this point.

RECOMMENDED RESOURCES:
(See Appendix I to Annex F)

	Type	Length
BOOM:	N/A	
SKIMMER:	N/A	

PERSONNEL REQUIRED:
Utilize 6 people to operate skimmers/vacuum trucks, a 3 person boat crew, and 6 people to deploy and tend boom.

SITE SUMMARY SHEET

SITE: CC-016-A **Soquel Creek Inlet** Ospr Map No. 065

County: Santa Cruz Lat:
Long:

SITE DESCRIPTION:

Creek mouth and lagoon in heavily urbanized area. Recreational beach.

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

Shore birds and coastal sea birds including comorants and brown pelicans (endangered). Lagoon provides winter habitat for mallards, grebes, coots and gulls. The creek supports an important steelhead trout run. A plant species, Mimic tryonia inhabits the lagoon.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

City of Capitola

REMARKS:

High recreational use: Capitola City Beach.

Site Strategy
Site: CC-016-A Soquel Creek Inlet

PROTECTION STRATEGY:

This inlet can probably be closed with a sediment dike (medium-grain sand about 300 feet long). If the inlet cannot be closed, use deflection boom to divert oil to the sandy area on the west side of the channel.

COLLECTION POINTS:

Divert oil to west side of channel (near highway bridge), for vacuum truck pick up.

ACCESS TO AREAS:

From Santa Cruz, take Highway 1 south to Bay Ave. off ramp in Capitola. Turn right onto Bay Avenue. Continue on Bay Avenue and turn right onto Capitola Avenue. Turn right onto Stockton Avenue. Turn left onto Esplanade, and follow to parking lot.

RECOMMENDED RESOURCES:

	Type	Length
BOOM:	18" harbor	100'
SKIMMER:	Duck-bill head	

PERSONNEL REQUIRED:

Use 4 people to deploy and tend boom and 4 people to operate skimmer.

INLET SKETCH MAP

SOQUEL RIVER

Inlet Name INLET, CA.

Recorder(s) MOH / TMM / KM

Date/Time 3 NOV. 1992, 1415

Tide Stage LOW @ 1510 (-0.1), SANTA CRUZ

Inlet Classification C

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

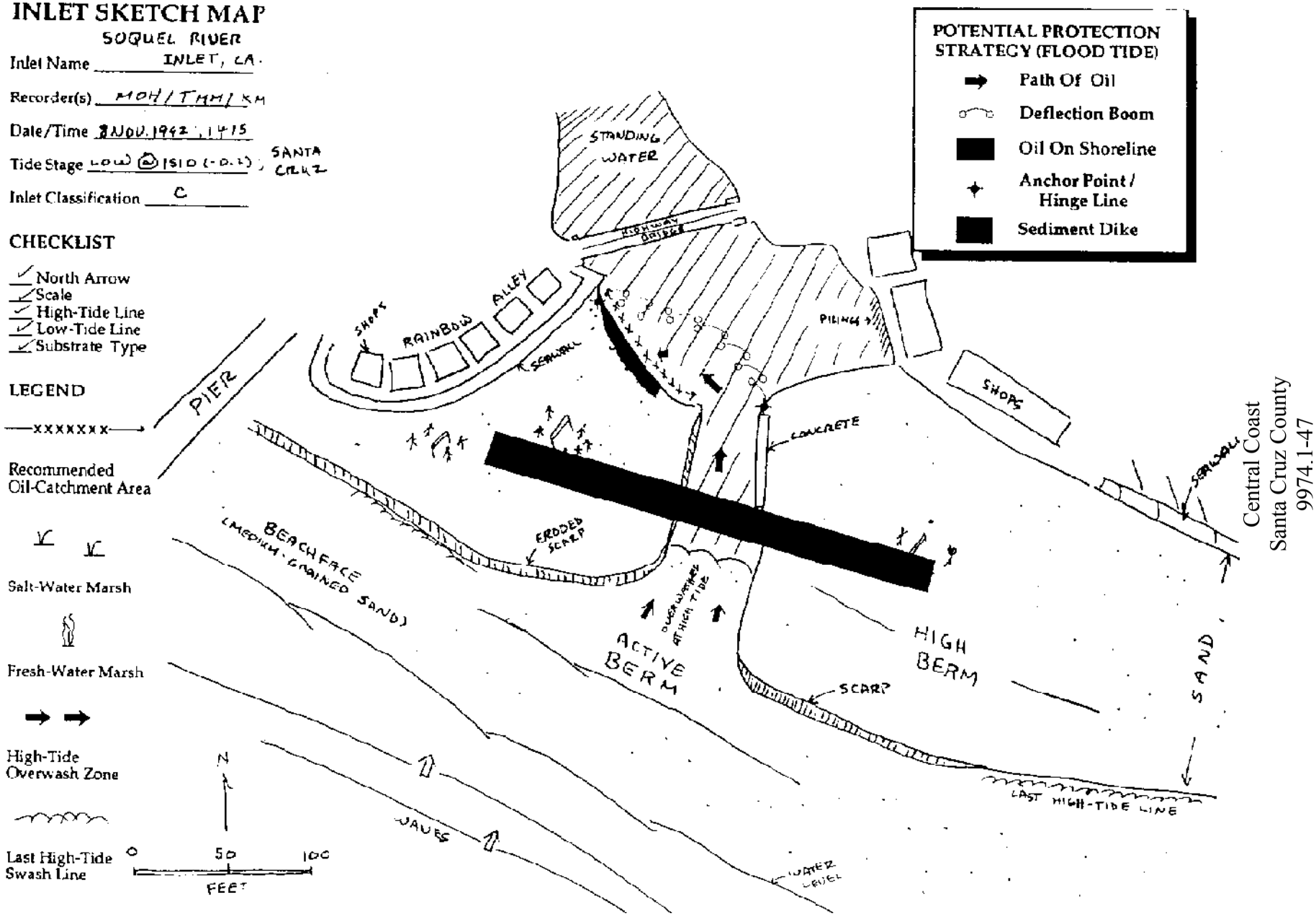
—xxxxxxx→ Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



Central Coast
Santa Cruz County
9974.1-47

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-017-A **Aptos Creek Inlet** Ospr Map No. 065

County: Santa Cruz Lat.
USGS 7.5' Quad: Soquel Long.

SITE DESCRIPTION:

Minor marsh along channel parallel to seawall.

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

Shore birds and coastal sea birds including Cormorants and Brown Pelicans (endangered). California Sea Lions, Harbor Seals and Sea Otters are found offshore. In the creek, Tidewater Goby (candidate for federal listing) is present; Steelhead Trout are present in winter, spring and fall.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS:

California Dept. of Parks & Recreation (831)-649-2810

REMARKS:

High recreational use: Seacliff State Beach

Site Strategy
Site: CC-017-A Aptos Creek Inlet

PROTECTION STRATEGY:
Close off stream mouth with sediment dike (medium to fine-grain sand) about 400 feet long. Orient dike east/west and place it about 50 feet seaward of piling. Note: After major storms, sediment supply may be limited.

COLLECTION POINTS:
If the large berm-ridge and runnel (trough) configuration is present during a spill, a considerable amount of oil could accumulate in the runnel.

ACCESS TO AREAS:
From Santa Cruz, take Highway 1 south to Sea Cliff Beach off ramp (turn right). Turn left onto Center Avenue. Veer right onto Seacliff Drive. At the stop sign, turn right onto Spreckles Drive. At the bottom of the hill, turn right onto Treasure Island Drive. The road ends at the beach front. Turn right into the parking lot.

RECOMMENDED RESOURCES:
(See Appendix I to Annex F)

	Type	Length
BOOM:	N/A	
SKIMMER:	N/A	

PERSONNEL REQUIRED:
N/A

INLET SKETCH MAP

APTOS CREEK

Inlet Name: INLET, CA

Recorder(s): MM/TMM/KM

Date/Time: [illegible] 1330

Tide Stage: LOW @ 1310 (-0.7) / SANTA CRUZ

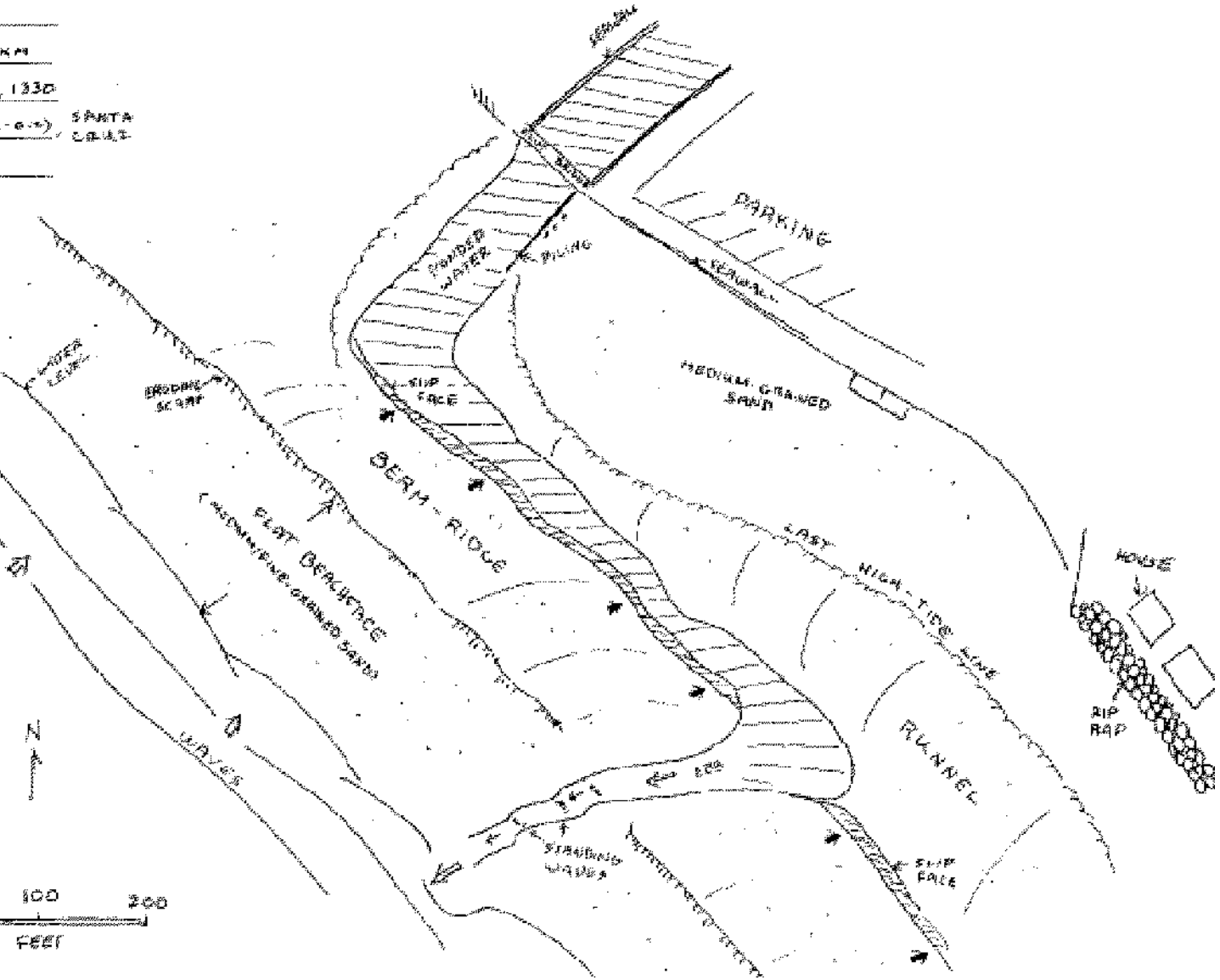
Inlet Classification: D

CHECKLIST

- North Arrow
- Scale
- High-Tide Line
- Low-Tide Line
- Substrate Type

LEGEND

- Recommended Oil-Catchment Area
- Salt-Water Marsh
- Fresh-Water Marsh
- High-Tide Overwash Zone
- Last High-Tide Swash Line



Central Coast
Santa Cruz County
9974.1-51

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-018-C **Sunset & Manresa State Beaches** Ospr Map No. 066

County: Santa Cruz Lat.
USGS 7.5" Quad: Watsonville West Long.

SITE DESCRIPTION:

Sunset State Beach and Manresa State Beach. Fine to medium grain sandy beaches.

SEASONAL CONCERNS:

Year round

RESOURCES OF PRIMARY CONCERN:

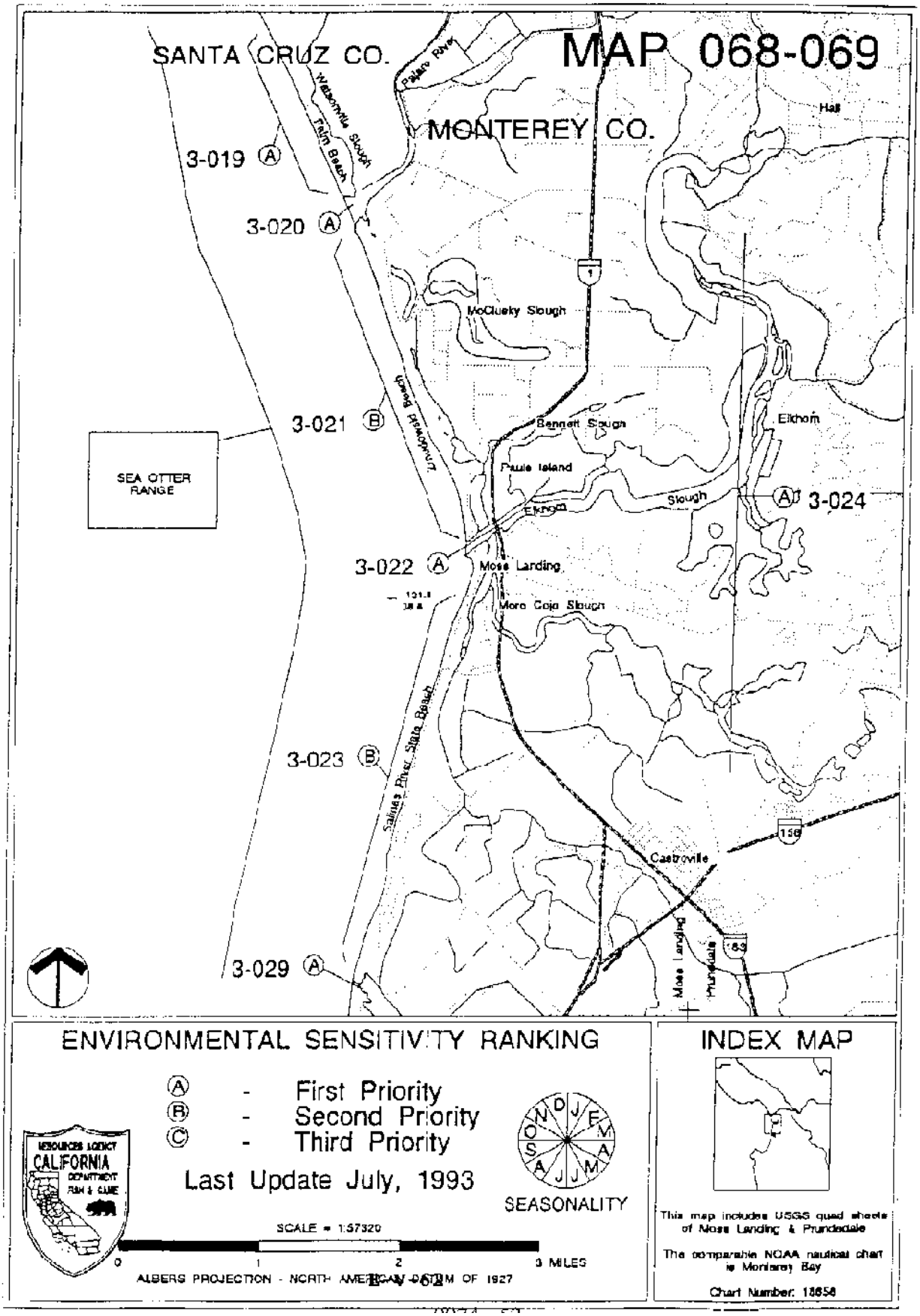
California Least Terns (endangered), Western Snowy Plover (threatened), and other shore birds and sea birds are present. Pismo clams are present in low numbers. The Black Legless Lizard (candidate for federal listing) uses the foredunes near Shell Road (NDDB). Plant species include the Monterey Spineflower (candidate for federal listing), present in the dunes at Manresa State Beach, and the Robust Spineflower south of the Manresa State Beach entrance. Locally unique plant species (locations identified by additional arrows) include: Habernaria elegans, Clarkia rebicunda blasdalei, Salix hindsiana, Agrostis californica, Cirsium Quercetorum, Wyethia spp, Gnaphalium bicolor, Clarkia rubicunda blasdalei, and Habernaria elegans. The southern end of this map is part of the Pajaro Sand Dunes. Other locally unique plants include Carex pansa, Chorizanthe spp, Poa douglasii, and Erysimum ammophilum (endangered).

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks & Recreation (831) 649-2810
Suzanne Smith, Santa Cruz County Resource Planner (831) 454-3162

REMARKS:

High recreational use.


MAP 068-069
SANTA CRUZ CO.
MONTEREY CO.
Pajaro River
Watsonville Slough
Twin Beach
3-019 A
3-020 A
McQueky Slough
Tynan Road Beach
3-021 B
SEA OTTER RANGE
Bennett Slough
Elkhorn
Elkhorn Slough
3-024 A
Moss Landing
3-022 A
Moro Cojo Slough
Salinas River State Beach
3-023 B
Castroville
3-029 A
Moss Landing
Prunedale
ENVIRONMENTAL SENSITIVITY RANKING
A - First Priority
B - Second Priority
C - Third Priority
Last Update July, 1993
SEASONALITY
SCALE = 1:57320
0 1 2 3 MILES
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927
INDEX MAP
This map includes USGS quad sheets of Moss Landing & Prunedale
The comparable NOAA nautical chart is Monterey Bay
Chart Number: 18858

SITE SUMMARY SHEET

SITE: CC-019-A **Palm Beach - Sunset State Beach (south end)** Ospr Map No. 068

County: Santa Cruz Lat.

USGS 7.5' Quad: Moss Landing Long.

SITE DESCRIPTION:

Fine to medium grain sandy beach.

SEASONAL CONCERNS:

Year round.

RESOURCES OF PRIMARY CONCERN:

California Least Terns (endangered), Western Snowy Plover(threatened), and other shore birds and sea birds are present. Locally unique plants in this area include: Carex pansa, Chorizanthe spp, Poa douglasii, and Castilleja latifolia.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERT :

California Dept. Parks & Recreation (831) 649-2810
Suzanne Smith, Santa Cruz Co. Resource Planner (831) 454-3162

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-025-B **Pelican Rock and inland area** Ospr Map No. 062

County: Santa Cruz Lat.
USGS 7.5' Quad: Ano Nuevo Long.

SITE DESCRIPTION:

Wave-cut platform.

SEASONAL CONCERNS:

Species of concern discussed below are present year round and are sensitive to disturbances caused by spill response activity. Because they will not be directly affected by oil, this site is a B response priority.

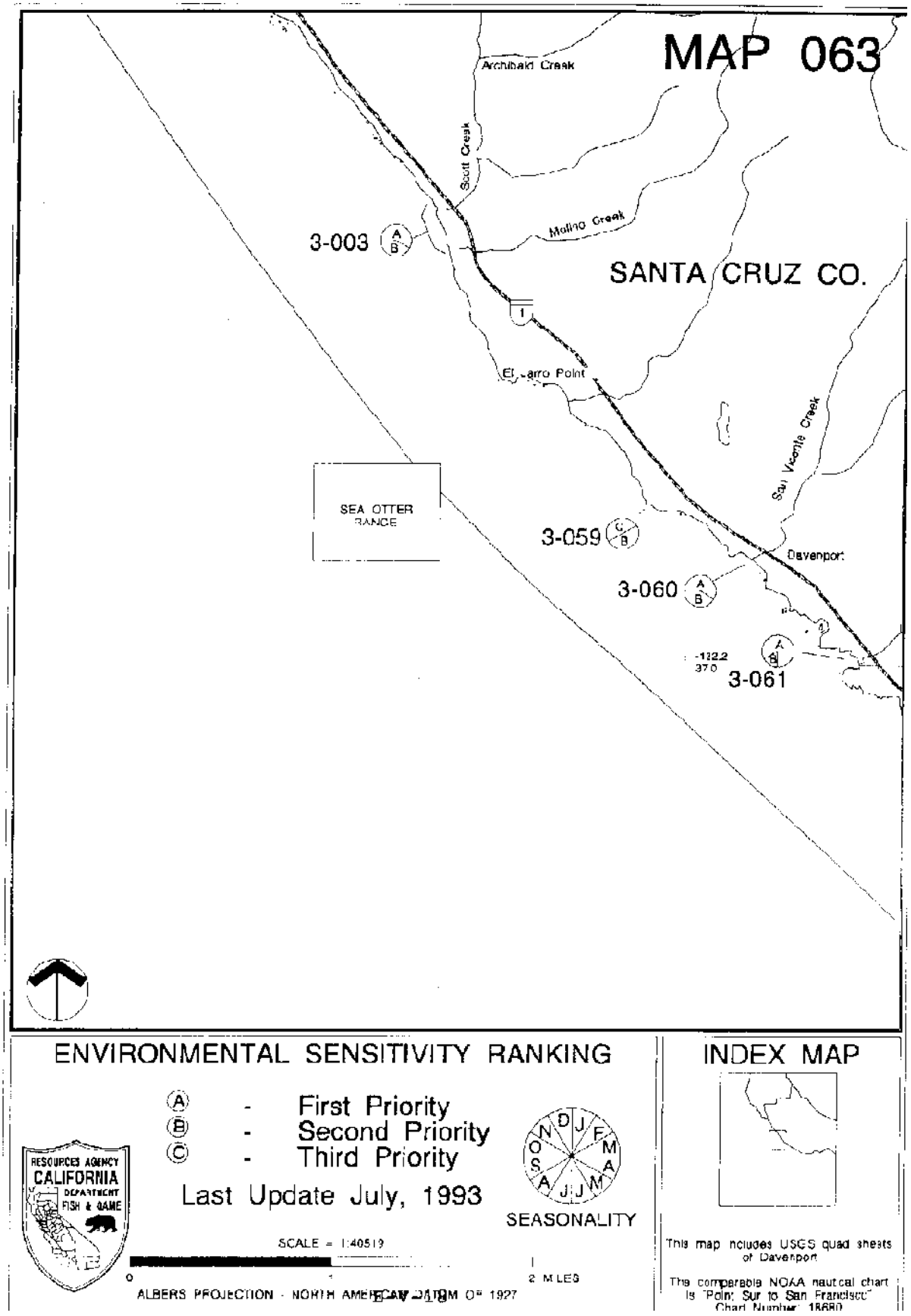
RESOURCES OF PRIMARY CONCERN:

Black swift, DFG species of special concern, nests in sea caves in rocky coastal cliffs (NDDB). On the coastal bluffs are the following locally rare plants: Erisimum franciscanum, Rumex fenestratus, and Agrostis spp.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Suzanne Smith, Santa Cruz Co. Resource Planner, (831) 454-3162

REMARKS:


MAP 063
Archibald Creek
Scott Creek
Molino Creek
3-003
SANTA CRUZ CO.
El Jarro Point
San Vicente Creek
SEA OTTER RANGE
3-059
Davenport
3-060
-122.2
37.0
3-061
ENVIRONMENTAL SENSITIVITY RANKING
A - First Priority
B - Second Priority
C - Third Priority
Last Update July, 1993
RESOURCES AGENCY CALIFORNIA DEPARTMENT FISH & GAME
SEASONALITY
SCALE = 1:40519
0
1
2 MILES
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927
INDEX MAP
This map includes USGS quad sheets of Davenport
The comparable NOAA nautical chart is "Point Sur to San Francisco" Chart Number 18680

SITE SUMMARY SHEET

SITE: CC-026-A/B **Yellow Bank Creek** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Main beach is 100 yards long by 70 yards wide separated from another long, narrow beach to the south side by a small rock archway. This beach is pnly accessible at low to medium tides. Marsh at mouth of Yellow Bank Creek and sea cave 0.4 mi SSE of marsh.

SEASONAL CONCERNS:

Species of concern discussed below are present year round. This is a **B** priority during summer months (i.e. during periods of low or no flow, or lower tides).

RESOURCES OF PRIMARY CONCERN:

Black Swift (DFG species of special concern, NDDB). Michael's piperoa (Piperia michaelii), a plant species of concern, (CNPS) exists in the coastal scrub community. Steelhead trout present during high-flow periods.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Dave Hope, Santa Cruz County Resource Planner (831) 454-3096

REMARKS:

Private ownership. Black Seift Nest in a sea cave in a rocky coastal cliff (elev. 20 ft.). Pair was observed gathering Enteromorpha algae from intertidal zone and carrying it to nest site (NDDB). Last seen 1988.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-059-C **Davenport Pier** Ospr Map No. 063

County: Santa Cruz Lat.
USGS 7.5' Quad: Davenport Long.

SITE DESCRIPTION:

Remnants of old steel pier.

SEASONAL CONCERNS:

Species of concern discussed below are present year round. Brandt's cormorants are present year round, and nest February-August (peak egg laying is in April).

RESOURCES OF PRIMARY CONCERN:

Brandt's cormorants roost on this pier and nest February - August (peak egg-laying is in April).

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Donna Bradford, Santa Cruz Co. Resource Planner (831) 454-3105

REMARKS:

This is the only Brandt's cormorants roosting and nesting area in the County of Santa Cruz.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-060-A/B **San Vicente Creek** Ospr Map No. 063

County: Santa Cruz Lat.
USGS 7.5' Quad: Davenport Long.

SITE DESCRIPTION:

Medium to granular sandy beach. Two creek inlets on southern and northern extremes.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Native coho salmon and steelhead trout migrate upstream and downstream when inlet is open to tidal flow. High populations of sand crabs and isopods on beach.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Dave Hope, Santa Cruz County Resource Planner (831) 454-3096

REMARKS:

Cultural sites located on bluff.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-061-A/B **Liddell Creek and Bonny Doon Beach** Ospr Map No. 063

County: Santa Cruz Lat.
USGS 7.5' Quad: Davenport Long.

SITE DESCRIPTION:

Sandy beach, across from Bonny Doon Road. Sandy beach surrounded by mud and sandstone cliffs. Creek flowing out of base of eastern face of cliff through man-made tunnel. Marine terraces on north end of beach. Sparse beach wrack present.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

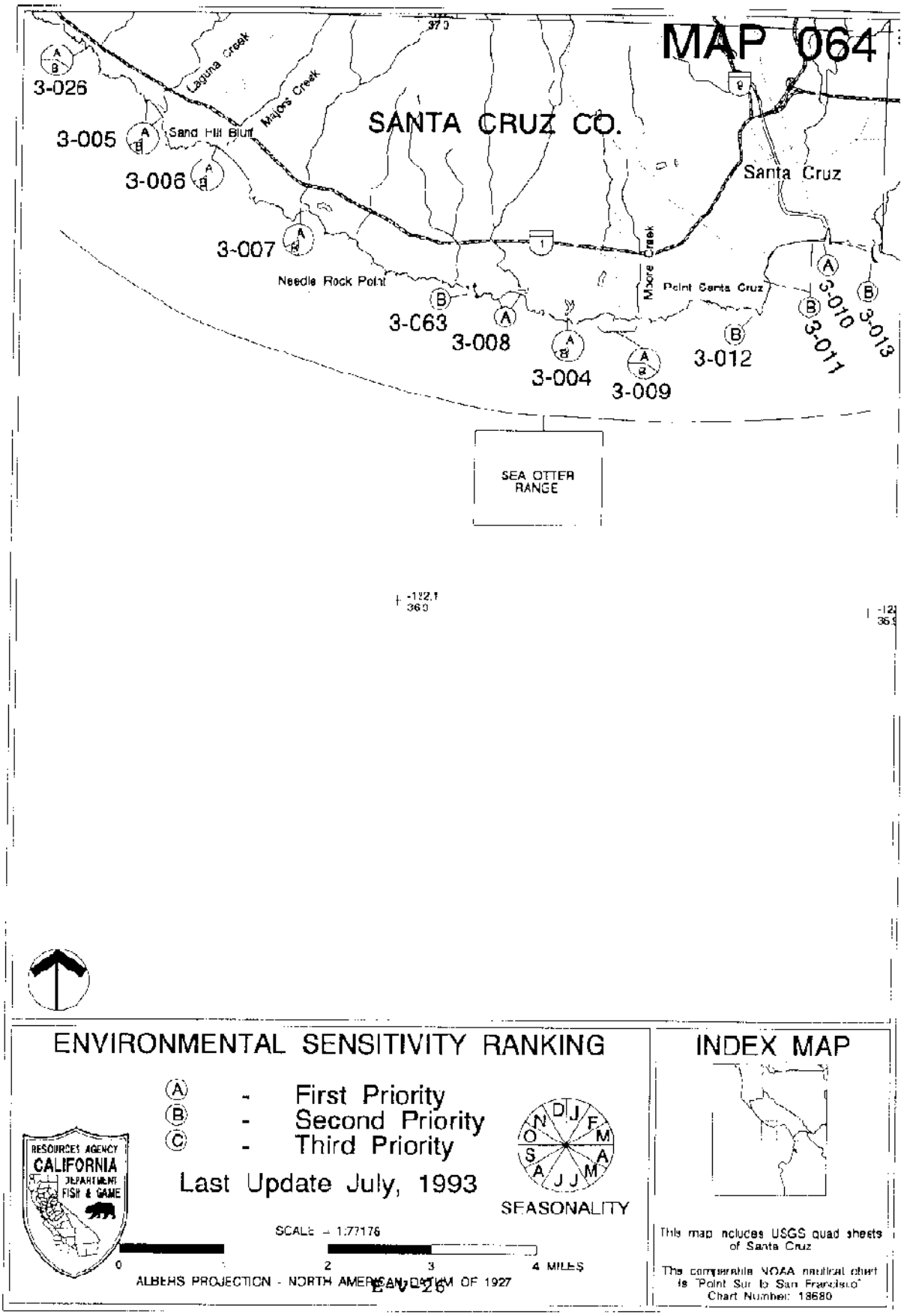
This area is a migrant bird concentration point and an important resting and feeding area for migrating songbirds and Snowy plover (shorebird). Liddell Creek is an anadromous fish stream for Steel-head Trout. Endangered plant species, Tanacetum camphoratum, can also be found. Potential cultural site on bluffs. Beach used by sun-bathers, surfers, and surf fishermen.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Dave Hope, Santa Cruz County Resource Planner (831) 454-3096

REMARKS:

Private ownership.


MAP 064
SANTA CRUZ CO.
Santa Cruz
Laguna Creek
Majors Creek
Sand Hill Bluff
Needle Rock Point
Moore Creek
Point Santa Cruz
3-026
3-005
3-006
3-007
3-063
3-008
3-004
3-009
3-012
3-011
3-010
3-013
SEA OTTER RANGE
-122.1
36.9
ENVIRONMENTAL SENSITIVITY RANKING
A - First Priority
B - Second Priority
C - Third Priority
Last Update July, 1993
SEASONALITY
RESOURCES AGENCY
CALIFORNIA
DEPARTMENT FISH & GAME
SCALE = 1:77176
0
2
3
4 MILES
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927
INDEX MAP
This map includes USGS quad sheets of Santa Cruz
The comparable NOAA nautical chart is "Point Sur to San Francisco" Chart Number: 18680

SITE SUMMARY SHEET

SITE: CC-062-C **New Brighton State Beach** Ospr Map No. 064

County: Santa Cruz Lat.
USGS 7.5' Quad: Soquel Long.

SITE DESCRIPTION:

Medium-grain sandy beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Locally unique plants including Ceanothus integerrimus, Ceanothus thyrsiflorus repens, and Lupinus formosus.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Suzanne smith, Santa Cruz Co. Resource Planner (831) 454-3162
California State Parks (831) 649-2810

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-063-A/B **Offshore Rock N of Terrace Pt** Ospr Map No. 63

County: Santa Cruz Lat.
USGS 7.5' Quad: Santa Cruz Long.

SITE DESCRIPTION:

Offshore rock with moderate- to high-energy ocean waves.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

This is a haulout for moderate numbers of California Sea Lions.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

This Page Intentionally Blank

MONTEREY COUNTY

9974 Central Coast Site Strategies (Cont.)

9974.2 Monterey County

SITE SUMMARY SHEET

SITE: CC-020-A **Pajaro River Inlet** OSPR Map no. 068

County: Monterey and Santa Cruz Lat.
Long.

SITE DESCRIPTION:

Extensive salt marsh in Watsonville Slough and along shoreline of Pajaro River. The inlet is within the Sunset State Beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

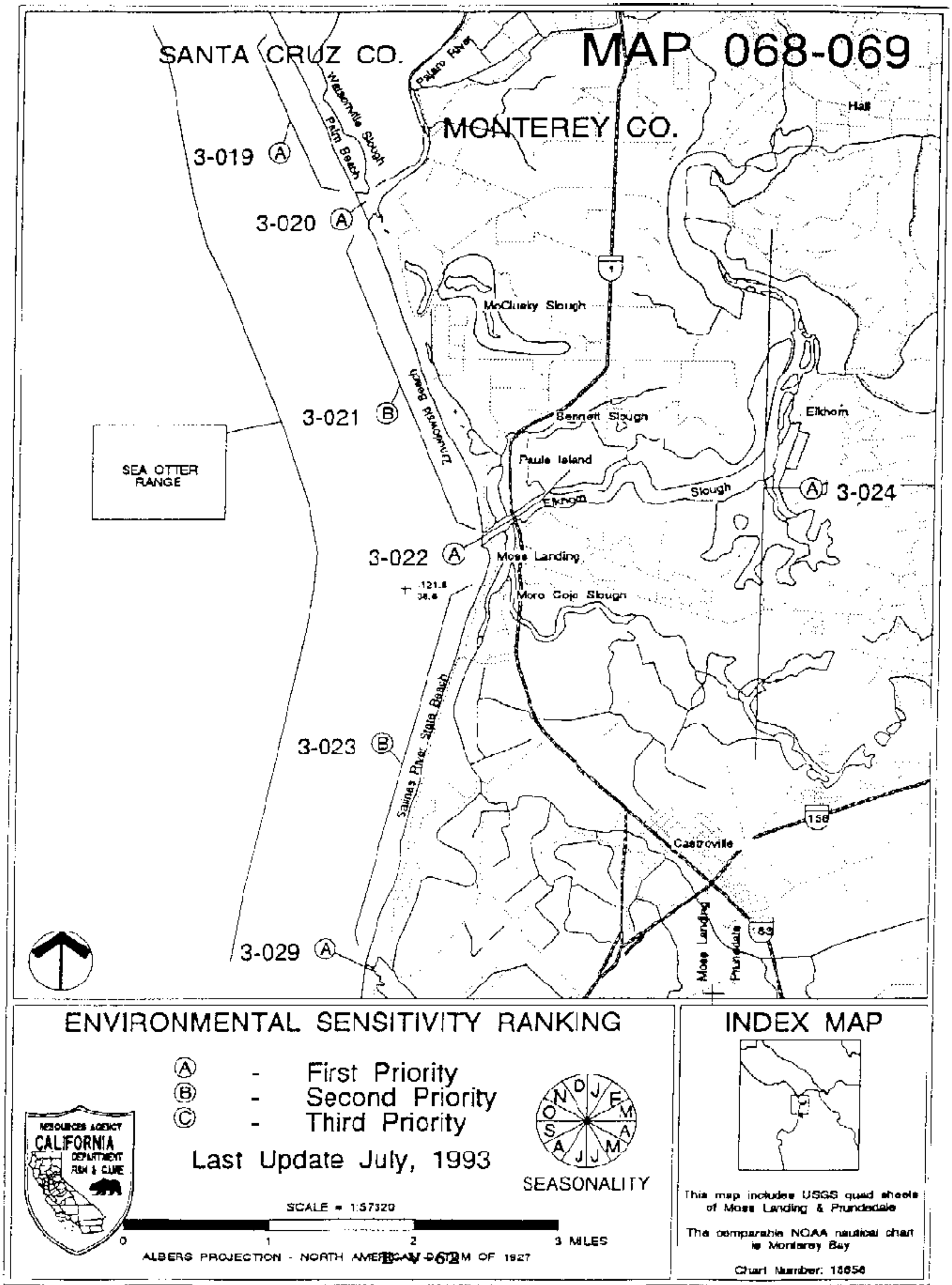
RESOURCES OF PRIMARY CONCERN:

Large numbers of birds, including waders (e.g. Black-Necked Stilts, American Avocets) and waterfowl (e.g. Coots and Mallards), and coastal seabirds such as Cormorants and Brown Pelicans (endangered). Steelhead Trout are also present. Tidewater Gobies (candidate species) are found in this creek. Bank Swallows (threatened) can be found at the river mouth (NDDB). Also at the river mouth is the proposed endangered plant species, Monterey Spineflower. Snowy Plovers (threatened). State Natural Preserves on south side of Pajaro River Monterey County.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

California Department of Parks and Recreation (831) 649-2810
John Warriner (831) 722-5589

REMARKS:


MAP 068-069
SANTA CRUZ CO.
MONTEREY CO.
Pajaro River
Watsonville Slough
Palm Beach
Hall
3-019
3-020
3-021
3-022
3-023
3-024
3-029
McClusky Slough
Zmudowski Beach
Bennett Slough
Elkhorn
Paule Island
Elkhorn Slough
SEA OTTER RANGE
Moss Landing
Moro Cojo Slough
Salinas River State Beach
Castroville
Moss Landing
Prundale
ENVIRONMENTAL SENSITIVITY RANKING
Ⓐ - First Priority
Ⓑ - Second Priority
Ⓒ - Third Priority
Last Update July, 1993
SEASONALITY
RESOURCES AGENCY
CALIFORNIA
DEPARTMENT FISH & GAME
SCALE = 1:57320
0
1
2
3 MILES
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927
INDEX MAP
This map includes USGS quad sheets of Moss Landing & Prundedale
The comparable NOAA nautical chart is Monterey Bay
Chart Number: 18656

INLET SKETCH MAP

Inlet Name PAJARO RIVER INLET, CA.

Recorder(s) MOH/TMM/KM

Date/Time 8 NOV. 1991; 1145

Tide Stage LOW @ 1520 (-0.3); MOSS LANDING

Inlet Classification C

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

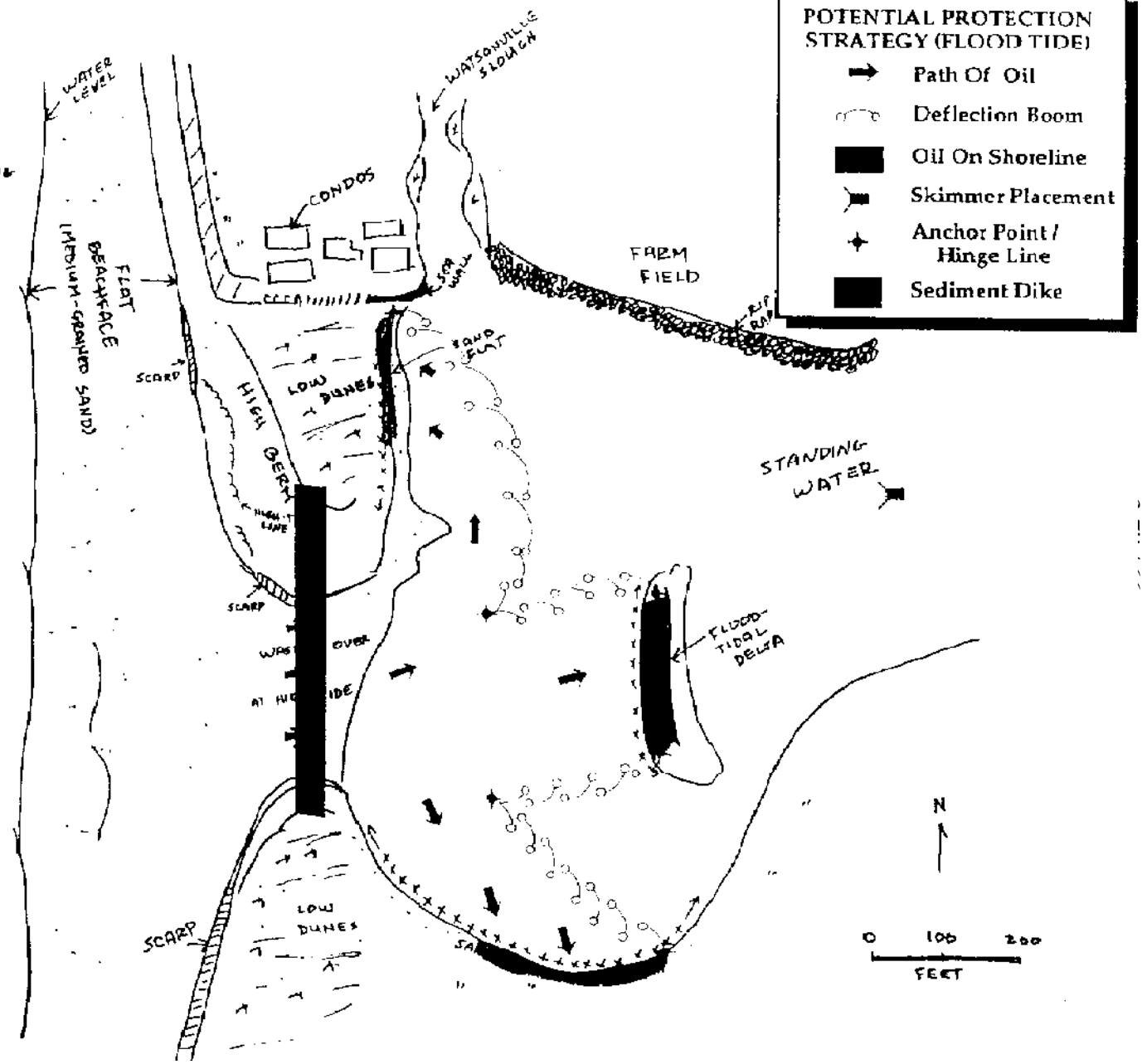
——XXXXXXX——→ Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-021-B **Zmudowski Beach State Park** Ospr Map No. 068

County: Monterey Lat.
USGS 7.5" QUAD: Moss Landing Long.

SITE DESCRIPTION:

Zmudowski Beach State Park. Fine to medium course grain sandy beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Endangered California Least Terns and threatened Snowy Plovers, as well as other shore and sea birds, can be found. The Black Legless Lizard (candidate species) utilizes habitat just south of the mouth of Pajaro River. Listed and sensitive dune plants include Gilia tenuiflora, Menzies wallflower, and Corizanthe purgens.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

High recreational use. The entrance to the ecologically diverse Elkhorn Slough is directly adjacent to Zmudowski Beach. Therefore, Zmudowski Beach (even though endangered species utilize this beach) is ranked a “B”.

This Page Intentionally Blank

ELKHORN SLOUGH GEOGRAPHIC RESPONSE PLAN

An insert to the Central Coast Area Contingency Plan and a removable field guide to be used during an oil spill response.

INTRODUCTION

General Description: Elkhorn Slough is a salt-water estuary with seasonal freshwater input from winter storms. It joins Monterey Bay through the entrance to Moss Landing Harbor, a rip-rapped channel. The Slough is over seven miles long, roughly shaped like the letter "S".

State Highway 1, a two-lane road, crosses the slough near its entrance, effectively dividing the Slough from Moss Landing Harbor. Traffic on Highway 1, often heavy, is composed of passenger cars, agriculture machinery and trucks, which carry a wide variety of finished products and raw materials, including agricultural produce.

About six miles of Union Pacific Railroad track are laid alongside the slough's main channel. A trestle crosses the entrance to Parson's Slough, and farther north, another crosses the slough channel almost at its farthest end. The tracks are part of the coastal route which carries AMTRAK passengers and the goods of interstate commerce.

Rail and truck cargoes are in bulk, in containers or in tanks. Loads that pose a threat to living natural resources of Elkhorn Slough include oil, industrial chemicals, fertilizers and pesticides.

Currents: Twice-daily tides cause almost all of the water exchange in Elkhorn Slough. Although narrow, the main channel carries large volumes of water which flood large marshes and mudflats on either side of the channel's full length. As a result, currents are fairly fast. Currents are particularly swift as they pass through restrictions at Highway 1 and the entrance channel at Parson's slough, and have scoured deep channels.

Hydrology: Elkhorn Slough drains approximately 61.2 square miles of mostly agricultural lands, devoted primarily to dairy farms and truck crops. However, surrounding soils are sandy so little freshwater run-off reaches the slough except during winter rains. It is estimated that a complete water exchange requires about two complete tidal cycles.

Although Moss Landing Harbor straddles the slough beyond the Highway 1 bridge, studies indicate there is little mixing of waters between them.

Elkhorn Slough tides are characterized as mixed because there is a major high, a major low, a minor high and a minor low tide, in varying sequence, approximately every 24 hours. Greatest currents develop shortly after the tide turns, then diminish as the tide proceeds to slack high or low. Response supervisors should have tide tables or charts to assure worker safety and to plan response actions. Currents are approximately 2.5 knots at maximum flood or ebb.

Access: Elkhorn Slough is surrounded by roads, almost all of which are two-lane. However, direct road access to water's edge is extremely limited. Union Pacific's tracks provide the best access for heavy machinery and response equipment; however, access is still limited.

The Highway 1 bridge clearance restricts boat size to small skiffs. There is a launch ramp at Kirby Park, but bottom configuration limits boats of any draft to the main channels only, and even there, low tides will sometimes strand them. As a consequence, boat access is limited to small to medium-sized skiffs drawing less than three feet draft.

Helicopters may be the best platform for moving personnel and large amounts of response equipment and may also be a means for delivering and towing boom.

Likely Locations for Spills: Five sites seem vulnerable to spills. Listed in order of likelihood and probable spill severity they are:

1. The trestle crossing the entrance to Parsons's Slough. Wood pilings are set in wet peat soils. Earthquakes cause peat soils to move substantially which weaken the trestle's structure. A spill would seriously affect Parson's Slough and could be carried up and down channel by the next tide cycle. A derailment here would be difficult to deal with effectively because the track is the only way to get wreckage-removal and spill-response equipment to the site.

2. The grade crossing at Kirby Park. The tracks cross the park's entrance drive. There is no crossing gate, only a stop-look-listen sign. A train-motor vehicle collision could cause a spill of the locomotive's diesel fuel, and if there were a derailment, spilled materials could reach the slough, where currents could spread them to marshes and mudflats with almost no access.

3. The trestle crossing the Slough at its upper end. Wood pilings are again set in wet peat soils and vulnerable to earthquake, like the trestle at Parson's Slough. Depending on the tide, materials spilled here could eventually reach the whole slough system. However, its location at the extreme end of the Slough would probably provide more time to protect the most sensitive spots down channel.

4. The Highway 1 bridge. A collision involving a tractor-trailer rig could cause a spill at the Slough's mouth and at a location where currents are some of the fastest. The amount spilled would likely be less than a spill from one or more rail cars, but currents could carry spilled material to areas where there are sensitive marshes and special-status marine mammals are often present.

5. Elkhorn Road bridge over drainage into upper Elkhorn Slough. A collision involving a tractor-trailer rig could cause a spill at the same location as the trestle that parallels the road along this stretch. The spilled amount would probably be less than from a rail car at the same location, and its location at the extreme upper end of the Slough would probably provide more time to protect the Slough's most sensitive spots.

RESPONSE

A spill in any of the listed likely locations will almost surely affect the whole complex of channels, marshes and mudflats that make up Elkhorn Slough.

Delay will severely affect response options. Given the Slough's length of just over seven miles and estimating an average current of 1 knot for the six-hour duration of the ebb or flood, within one full tidal cycle, it seems likely a spill in any part of the slough could travel throughout the wetland complex. It further seems likely that protective efforts will be futile after a second full tidal cycle, or one 24-hour period.

Given these estimates, time is the most limited and fugitive resource for a spill response at Elkhorn Slough. At present, nearest response equipment and workers are located at Richmond, California and other locations in the San Francisco area. Travel time from Richmond with boats and equipment in tow will be two hours at highway speed limits, more likely three hours or more with typical traffic densities present. Responders will need additional time, a half hour at least, to mobilize and get on the road. When added to delays before notifications are received, it seems likely five or six hours -- or one ebb (or flow) cycle will have passed before responders begin their work.

Remote location of responders and equipment argues for staging equipment nearby. Because Union Pacific's tracks traverse much of the Slough, it seems reasonable to suggest resources be cached in rail cars located at Watsonville to the north and at Duke Power Plant, Castroville or Salinas to the south. Additional material should be located in Moss Landing for response to a spill at the Highway 1 bridge.

Observations of driftwood and other debris, along with direction of prevailing winds, indicate spilled materials will be wind-driven to the southern and eastern edges of the channel and into Parson's Slough.

This geographic response plan recommends a response to a spill at each of five locations, and for each, ranks strategies according to estimates of where tide currents might carry spilled materials. The plan addresses not only oil spills but considers spills of chemicals in 24 other categories. For some, no response is necessary; for others, no response is reasonably feasible. Response suggestions are offered for nine categories where response may be possible, after worker health and safety are assured. Table 1 presents a summary overview of the Slough, its living resources and ranked strategies to protect them. Table 2 presents ranked strategies for spills at each location depending on tide.

Figure A illustrates the strategies. Figure B portrays the rank order for deploying equipment for a spill at each location depending on the tide.

The plan assumes health and safety will be protected and does not deal with this issue. It does it address securing the spill or containing the spill at its source to the extent possible. These issues will be dealt with during incident response plans.

Likely Spill Locations & Possible Trajectories: Listed in order of probable severity of adverse effect:

(1) Derailment at Parson's Slough Trestle.

The tracks crossing Elkhorn Slough are part of the interstate coastal rail route. Trains carry passengers and goods of all kinds, including oil and hazardous materials. Access is limited except by railroad. Thus, a derailment at this site would present a serious threat to the Slough's living natural resources and a difficult cleanup problem. A derailment would likely cause several rail cars to fall into slough waters or onto mudflats alongside the rails.

Parson's Slough inlet is approximately at the midpoint of the major tidal volume. A spill at this point would spread over the slough on a flood tide, spread to Moss Landing Harbor on an ebb tide, then, on the following flood, would likely split. One portion would re-enter Parson's Slough and the other would continue up channel to contaminate Elkhorn Slough's middle reach and beyond. It's highly likely that the entire estuarine system would be contaminated by the end of two full tidal cycles. Prevailing winds would most probably drive spilled materials to Elkhorn Slough's eastern shoreline and perhaps deeper into Parson's Slough.

Parson's Slough is home to several protected species. The south side of the channel to Parson's slough is a harbor seal haulout area, and the north side is a Caspian tern rookery. In addition, southern sea otters raft in the main section of the Slough, just to the east of the channel.

(2) Collision with auto and possible derailment at Kirby Park.

The entrance to Kirby Park crosses the tracks approximately two thirds of the distance between Highway 1 and Elkhorn Slough's uppermost limit. There is no barrier gate nor flashing signal, only a Stop-Look-Listen sign. A motor vehicle struck by a train as the auto crossed the tracks could cause a derailment possibly resulting in spilled product flowing into the slough. Good vehicle access to the park will make wreckage removal easier than at other likely spill locations. However, marshes and other natural areas are nearby where access is limited. Additionally, responders on foot could cause as much damage to living resources as the spill itself.

Kirby Park is adjacent to several large mudflats. Flood tides would likely carry contaminants into the upper most reaches of the slough. Ebb tides would carry spilled materials into the middle reach, and almost certainly by the second ebb, to Moss Landing Harbor. Prevailing winds would probably tend to keep contaminants on the east side of the channel.

The Caspian tern rookery is seaward of Kirby Park. Shore birds and waterfowl are abundant year round, and seasonally superabundant. Mudflats support many invertebrates which make the foundation of Elkhorn Slough's food pyramid.

(3) Derailment at northern trestle near Elkhorn Road.

The northern trestle crosses Elkhorn Slough channel almost at its upper end. A derailment at this location would almost certainly result in one or more rail cars in the slough. Elkhorn Road parallels the tracks here and provides some access to aid cleanup operations.

A flood tide would likely spread contaminants to the slough's uppermost limits. Ebb tides would carry spilled materials past the mudflats, rookery, haulouts and otter rafts already mentioned. Water at this site is probably too shallow for all but the smallest boats. Thick mud presents a safety hazard to response workers.

A spill at this site would adversely affect waterfowl, shorebirds and invertebrates

(4) Collision at Highway 1 bridge.

Highway 1 crosses Elkhorn Slough where it joins with Moss Landing Harbor. A spill at this point would affect the lower to middle reaches of the slough and would likely spread into the harbor. In addition, annual or monthly highest tides could carry contaminants to the uppermost reaches. The road provides good access for wreckage removal and makes logistics for spill response easiest at this site of all the likely spill locations. In addition, each tractor-trailer carrying goods holds about half the quantity transported by its railroad counterpart. The bridge is fairly distant from the most sensitive habitats. As a consequence of these two factors, a spill at Highway 1 poses a smaller threat than railroad spills

Flood tides and prevailing winds will carry spilled materials well into the middle reaches of the slough and perhaps into Parson's slough. Contaminants would probably spread over the mudflats at the Moss Landing Wildlife Area. Ebb tides could carry spilled material into either arm of Moss Landing Harbor and out the harbor entrance into Monterey Bay.

In addition to threats to living resources mentioned earlier, a spill from the bridge could affect intertidal invertebrates, waterfowl and shorebirds in the Wildlife Area and in the harbor where sea otters might also be at risk.

(5) Collision at or near Elkhorn Road bridge.

Elkhorn Road crosses a major drainage to Elkhorn Slough, but at a point above the slough proper. A collision in this vicinity could cause contaminants to flow into the slough's upper reaches. Spilled quantities would likely be one or two truckloads of a wide variety of goods, including agricultural chemicals.

Flow into the slough may or may not occur, depending on whether tides reach the spill site or if it is raining.

Living resources in this vicinity include those mentioned earlier for the trestle located nearby. In addition, upland and riparian habitats and species might be affected.

TABLE 1: RESPONSE OBJECTIVES

	Reach & Approximate Length	Shoreline Protection Objective and Strategy	Estimated Needs Equipment and Personnel
A	S. Side Hwy 1 Bridge – W. Edge of Rip-Rap 6,000'	Objective: Protect shoreline habitats from spilled material Strategy: Deploy Swamp Boom along shore between rip-rap at Hwy 1 bridge $ edge of Zone B.	6,000' swamp boom, or equivalent sorbent or polymer-sorbent boom 4 skiffs, 8 workers 1 tender skiff, 2 workers; 1 pump & pump & barge (or equivalent) for skimmed material (can be shared with other zones).
B	W. Edge of Rip-Rap – E. Edge of Rip-rap 1,000'	Objective: Prevent spilled material from lodging in spaces between rocks. Strategy: Deploy Swamp Boom along shore to edge of Zone C	1000' swamp boom, or equivalent sorbent or polymer-sorbent boom 1 skiff, 2 workers 1 tender skiff, 2 workers; 1 pump & pump & barge (or equivalent) for skimmed material (can be shared with other zones).
C	E. Edge of Rip-rap – Parson's Slough Inlet 6,000'	Objective: Protect mudflats from spilled material Strategy: Deploy Swamp Boom along shore to edge of Zone D; boom inlet with multiple chevron tiers of Swamp Boom & skimmers. Service from tracks or boats as feasible. Consider putting collected material in floating bladder-tanks.	6,000' swamp boom, or equivalent sorbent or polymer-sorbent boom 4 skiffs, 8 workers 1 tender skiff, 2 workers; 1 pump & pump & barge (or equivalent) for skimmed material (can be shared with other zones).
D	Parson's Slough 449.4 ACRES	Objective: Protective marsh from spilled material Strategy: Set up "Vee" shaped boom on either side of bridge, with skimmer at throat. Provide 2nd & 3rd tier as possible & needed inland. End cleanup effort in material reaches mudflat or beyond. Allow natural recovery to occur.	8000' swamp boom, or equivalent sorbent or polymer-sorbent boom 4 skiffs, 6 workers 1 tender skiff, 2 workers; 1 pump & barge (or equivalent) for skimmed material (can be shared with other zones).
E	Parson's Slough Inlet – Tide Gate 8,000'	Objective: Protect mudflats from spilled material Strategy: Deploy Swamp Boom along shore to edge of Zone E; Close tidegate.	8,000' awamp boom, or equivalent sorbent or polymer-sorbent boom 4 skiffs, 8 workers 1 tender skiff, 2 workers; 1 pump & pump & barge (or equivalent) for skimmed matierial.

	Reach & Approximate Length	Shoreline Protection Objective and Strategy	Estimated Needs Equipment and Personnel
F	Mudflat behind Tidegate 17.5 ACRES	Objective: Protect mudflats behind tidegate from spilled material. Strategy: Close tidegate. If needed set up "Vee" shaped boom behind tidegate, with skimmer at throat. End cleanup effort if spilled material reached mudflat or beyond. Allow natural recovery to occur.	300' boom (150' each leg) 4 anchors. 4 workers working from shoreline. 2-person tender crew; 1 pump & receptacle for skimmed material
G	Tide Gate – Intersection with northern trestle 12,000'	Objective: Protect mudflats from spilled material. Strategy: Deploy Swamp Boom along shore to edge of tidal influence	12,000' swamp boom, or equivalent sorbent or polymer-sorbent boom 6 skiffs, 12 workers 1 tender skiff, 2 workers; 1 pump & barge (or equivalent) for skimmed material (can be shared with other zones)
H	Northeast side of northern trestle – Farthest reaches of Slough, E & N Side 16,000' 250.4 ACRES	Objective: Protect marsh and mudflats from spilled material Strategy: Close tidegates; If feasible, set "Vee" shaped boom at trestle with skimmer at throat; Alternatively, deploy Swamp Boom from one foot of trestle to farm road to east; deploy Swamp Boom along shore to edge of tidal influence	5,000' swamp boom, or equivalent sorbent or polymer-sorbent boom; 1 skimmer 10 workers, hammers, stakes, shovels. For each "Vee": 200' swamp boom (100' each leg) 1 skimmer; 4 anchors 2 skiffs, 4 workers 1 tender skiff, 2 workers; 1 pump & barge (or equivalent) for skimmed material (can be shared with other zones); use Vac-truck at farm road
I	Moss Landing Wildlife Area 317.9 ACRES	Objective: Protect marsh and mudflats from spilled material Strategy: If feasible with daily tides, at each low point, or channel, set up "Vee" shaped boom with skimmer at throat. End cleanup effort if material reaches mudflat or beyond. Allow natural recovery to occur.	For each "Vee": 200' swamp boom (100' each leg) 1 skimmer, 4 anchors 2 skiffs, 4 workers 1 tender skiff, 2 workers; 1 pump & barge (or equivalent) for skimmed material (can be shared with other zones)
J	N. Side Hwy 1 Bridge – E. Edge MLWA 5,000'	Objective: Protect mudflats from spilled material Strategy: Deploy Swamp Boom along shore to edge of Zone G; Block low spots on natural berm to prevent contamination of mudflat.	5,000' swamp boom, or equivalent sorbent or polymer-sorbent boom 3 skiffs, 6 workers 1 tender skiff, 2 workers; 1 pump & barge (or equivalent) for skimmed material (can be shared with other zones)

	Reach & Approximate Length	Shoreline Protection Objective and Strategy	Estimated Needs Equipment and Personnel
K	E. Egde MLWA – Inlet scross from Kirby Park 14,000’	Objective: Protect mudflats from spilled material] Strategy: Deploy Swamp Boom along shore to edge of Zone H	14,000’ swamp boom, or equivalent sorbent or polymer-sorbent boom 7 skiffs, 14 workers 1 tender skiff, 2 workers; 1 pump & barge (or equivalent) for skimmed material (can be shared with other zones)
L	Inlet across from Kirby Park – intersection with northern trestle 11,000’	Objective: Protect mudflats from spilled material] Strategy: Deploy Swamp Boom along shore to edge of Zone I	11,000’ swamp boom, or equivalent sorbent or polymer-sorbent boom 6 skiffs, 12 workers 1 tender skiff, 2 workers; 1 pump & barge (or equivalent) for skimmed material (can be shared with other zones) 6 skiffs, 12 workers

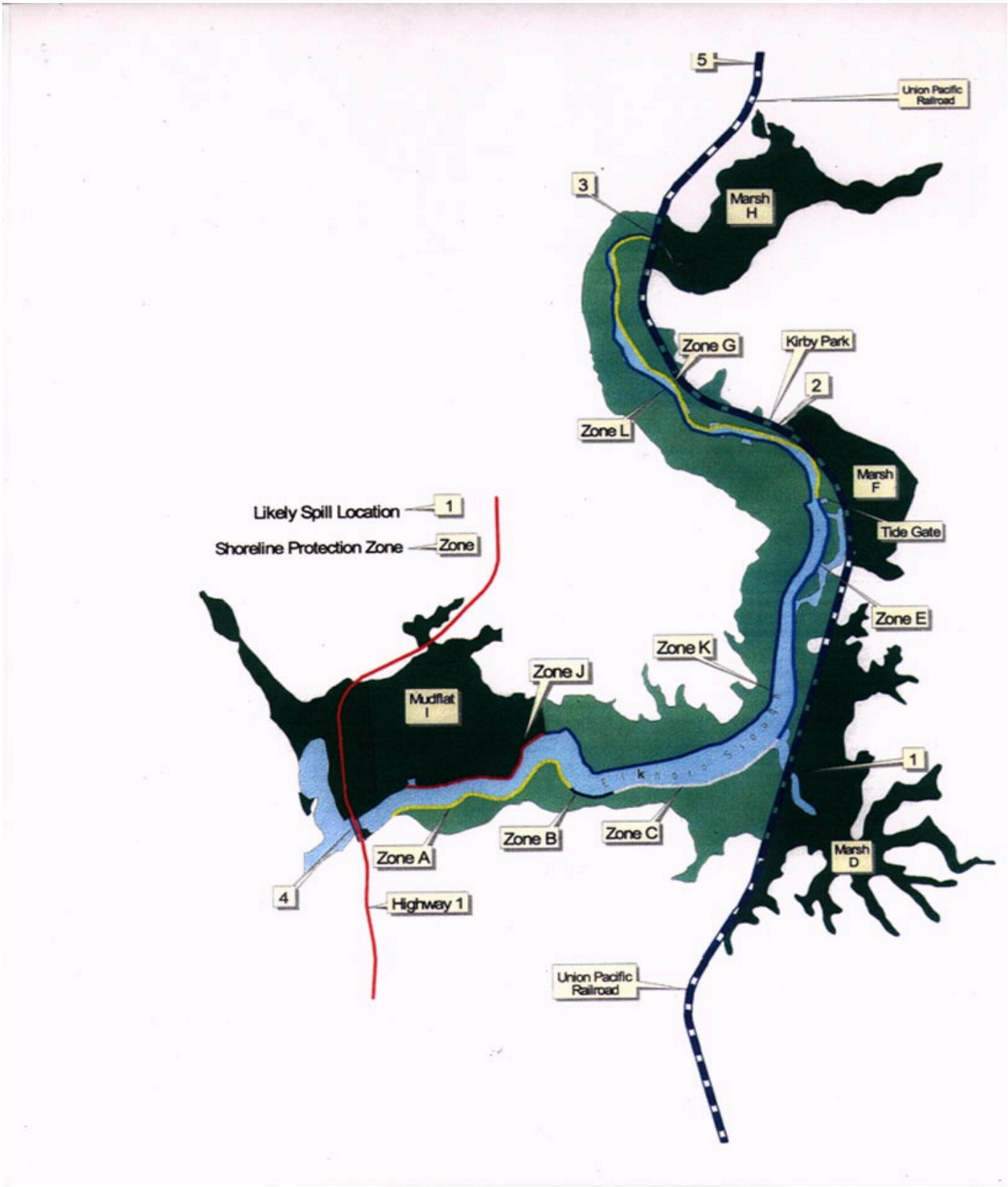
TABLE 2: RESPONSE STRATEGIES – OIL

	Reach & Approximate Length	Vulnerability Rank	ESI Type	Response priority for Spill Likely at: 1 2 3 4 5	Protectable Living Resources at Risk and Wildlife Operations	Shoreline Protection Strategy	Comments
A	S. Side Hwy 1 Bridge – W. Edge of Rip-Rap 6,000’	4	Salt Marsh	c 2 c 3 c 1 a 2 c 3 a 4 c 2 c 3 a 2 c 2	Waterfowl; Diving Birds; Gulls & Terns; Sea otters: Marine Mammals	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore between rip-rap at Hwy 1 bridge & edge of Zone B.	
B	W. Edge of Rip-Rap – E. Edge of Rip-Rap 1,000’	9	Rip-Rap	c 4 c 4 c 4 b 4 c 4 c 4 c 3 c 4 b 4 c 4	Waterfowl; Diving Birds; Gulls & Terns; Sea otters: Marine Mammals	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of Zone C.	
C	E. Edge of Rip-Rap – Parson’s Slough Inlet 6,000’	2	Salt Marsh	b 4 b 4 b 4 a 4 b 3 a 1 a 4 b 4 a 4 b 3	Waterfowl; Diving Birds; Gulls & Terns; Sea otters: Marine Mammals	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of Zone D; boom inlet with multiple chevron tiers of Swamp boom & skimmers. Service from tracks or boats as feasible. Consider putting collected oil in floating bladder-tanks.	Harbor Seal Haulout Avoid foot traffic on mudflats. Use airboats and, where appropriate, ATV. Focus effort on NRDA

D	Parson's Slough 449.4 ACRES	1	Salt Marsh; Tidal Flat	a 1 b 2	b 3 a 3	b 3 b 3	b 1 b 1	b 2 b 2	Waterfowl; Wading Birds; Shore Birds; Intertidal Invertebrates	Set up "Vee" shaped boom on either side of bridge, with skimmer at throat. Provide 2nd & 3rd tier as possible & needed inland. End cleanup effort if oil reaches mudflat or beyond. Allow natural recovery to occur.	Avoid foot traffic on mudflats. Use airboats and, where appropriate, ATV. Focus effort on NRDA
E	Parson's Slough Inlet – Tide Gate 8,000'	3	Salt Marsh	a 2 b 3	b 1 a 2	b 1 a 3	b 3 b 3	b 1 b 1	Waterfowl; Diving Birds; Wading Birds; Gulls & Terns; Sea Otters	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of Zone E; Close tidegate.	Caspian tern rookery on islands south of Eucalyptus trees. Avoid foot traffic on mudflats. Use airboats and, where appropriate, ATV. Focus effort on NRDA
F	Mudflat behind Tidegate 176.5 ACRES	8	Salt Marsh; Tidal Flat	a 4 c 1	a 3 b 1	a 4 a 4	c 3 c 3	a 4 a 4	Waterfowl; Wading Birds; Shore Birds; Intertidal Invertebrates	Set up "Vee" shaped boom behind tidegate, with skimmer at throat. End cleanup effort if oil reaches mudflat or beyond. Allow natural recovery to occur.	
G	Tide Gate – Intersection with northern trestle 12,000'	12	Salt Marsh; Tidal Flat	a 3 b 4	a 1 a 1	a 2 a 1	c 1 c 1	a 2 a 2	Waterfowl; Wading Birds; Shore Birds; Intertidal Invertebrates	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of tidal influence.	Avoid foot traffic on mudflats. Use airboats and, where appropriate, ATV. Focus effort on NRDA

H	Northeast side of northern trestle – Farthest reaches of Slough, E & N Side 250.4 ACRES	10	Salt Marsh; Tidal Flat	b 3 c 2	a 2 c 4	a 1 b 1	c 4 c 4	a 1 a 1	Waterfowl; Wading Birds; Shore Birds; Intertidal Invertebrates	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of tidal influence.	Avoid foot traffic on mudflats. Use airboats and, where appropriate, ATV. Focus effort on NRDA
I	Moss Landing Wildlife Area 317.9 ACRES	11	Salt Marsh; Tidal Flat	c 1 a 3	c 2 b 3	c 2 c 1	a 1 a 1	c 2 c 2	Waterfowl; Wading Birds; Shore Birds; Intertidal Invertebrates	If feasible with daily tides, at each low point, or channel, set up "Vee" shaped boom with skimmer at throat. End cleanup effort if oil reaches mudflat or beyond. Allow natural recovery to occur.	Avoid foot traffic on mudflats. Use airboats and, where appropriate, ATV.
J	N. Side Hwy 1 Bridge – E. Edge of Rip-Rap 5,000'	5	Salt Marsh	c 3 b 1	c 1 b 4	c 3 c 2	a 3 a 3	c 1 c 1	Waterfowl; Diving Birds; Gulls & Terns; Sea otters: Marine Mammals	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of Zone G. Block low spots on natural berm to prevent oiling of mudflat.	
K	E. Edge MLWA – Inlet across from Kirby Park 14,000'	6	Salt Marsh; Tidal Flat	b 1 a 2	b 2 b 2	b 2 b 2	b 2 b 2	b 4 b 4	Waterfowl; Diving Birds; Gulls & Terns; Sea otters: Marine Mammals	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of Zone H.	Avoid foot traffic on mudflats. Use airboats and, where appropriate, ATV. Focus effort on NRDA
L	Inlet across from Kirby Park – intersection with northern trestle 11,000'	7	Salt Marsh; Tidal Flat	b 2 c 3	a 4 c 1	a 3 a 2	c 2 c 2	a 3 a 3	Waterfowl; Diving Birds; Wading Birds; Gulls & Terns; Sea Otters; Intertidal Invertebrates	Deploy swamp boom, or equivalent sorbent or polymer-sorbent boom along shore to edge of Zone I	

FIGURE A: ELKHORN SLOUGH



Central Coast
Monterey County
9974.2-21

<u>FIGURE B</u>: Response Priorities Listed by Likely Spill Location and Tide Flow

Number (e.g. 1) indicates spill location. Letter (e.g. D) indicates reach to be protected.

To use this table, find "likely spill location" closest to incident. Go to the appropriate column for the tide stage (Flood or Ebb). Read down the column to determine which reaches to protect and in which order.

FLOOD TIDE Response Priority by Location								EBB TIDE Response Priority by Location				
1	2	3	4	5		Rank		1	2	3	4	5
D	G	H	I	H		**a 1**		C	H	G	I	H
E	H	G	A	G		**2**		K	G	L	A	G
G	F	L	J	L		**3**		I	F	E	J	L
F	L	F	C	F		**4**		A	L	F	C	F
K	E	E	D	E		**b 1**		J	E	H	D	E
L	K	K	K	D		**2**		D	K	K	K	D
H	D	D	E	C		**3**		E	D	D	E	C
C	C	C	B	K		**4**		G	C	C	B	K
I	J	A	G	J		**c 1**		F	J	A	G	J
A	I	I	L	I		**2**		H	I	I	L	I
J	A	J	F	A		**3**		L	A	J	F	A
B	B	B	H	B		**4**		B	B	B	H	B

CONTACT LIST FOR ELKHORN SLOUGH

Monterey Bay National Marine Sanctuary — 831-647-4252
Superintendent
299 Foam Street
Monterey, CA. 93940

Department of Fish and Game — 831-728-2822
Elkhorn Slough National Estuarine Research Reserve
Reserve Manager
1700 Elkhorn Road
Watsonville, CA 95076

Duke Energy Power Services — 831-633-6785
Environmental Specialist
P.O. Box 690
Moss Landing, CA 95039-0690

Monterey Office of Emergency Services — 831-755-5010
P.O. 1883
Salinas, CA 93902

Monterey County Environmental Health — 31-755-4511
1270 Natividad Road, Room 301
Salinas, CA 93906

California Department of Parks and Recreation — Dispatch: 831-649-2810
2211 Garden Road
Monterey, CA 93940 — Chief Ranger 831-649-2842

North Monterey County Fire — 831-633-2578
Division Chief
11200 Speegle Street
Castroville, CA 95012

Salinas Fire Department — 831-758-7261
Hazardous Materials Response Team
222 Lincoln Street
Salinas, CA 93901

Clean Bay Incorporated — 925-685-2800
2070 Commerce Avenue
Concord, Ca 94520

Moss Landing Harbor District Harbor Master P.O. Box 10 Moss Landing, CA 95039	831-633-2461
California Coastal Commission 45 Fremont St. Suite 2000 San Francisco, CA 94105	415-904-5296 (emergency permits: 415-904-5244)
Save Our Shores 2222 E. Cliff Drive #5 Santa Cruz, CA 95062	831-462-5660
U.S. Environmental Protection Agency, Region 9 Chief, Emergency Response Office 75 Hawthorne Street, SFD-1 San Francisco, CA 94105-3901	415-744-2293 Field Responder: 415-744-2332
U .S. Coast Guard Monterey Group 100 Lighthouse Ave. Monterey, CA 93940	831-647-7300
U.S. Fish and Wildlife Service 2493 Portola Road, Suite B Ventura, CA 93003	805-644-1766
Advance Cleanup Technologies, Inc. 20928 Lamberton Ave. Carson, CA 90810	310-763-1423
County of Santa Cruz Health Services Agency 701 Ocean Street, Rm. 312 Santa Cruz, CA 95060	831-454-2022
Department of Fish and Game Office of Spill Prevention and Response 1700 K Street, Suite 250 Sacramento, CA 94244	24 hour Dispatch: 916-445-0045
Union Pacific Railroad 1400 Middle Harbor Road Oakland, CA 94607	510-891-7729

NOAA'S Office of Response and Restoration Scientific Support Coordinator Coast Guard Island, Building 50-5 Alameda, CA 94501	510-437-5344
County of Santa Cruz Volunteer Coordinator 701 Ocean Street, Room 406B Santa Cruz, CA 95060	831-454-3105
Oiled Wildlife Care Network Wildlife Health Center-ITEH University of California Davis, CA 95616	530-754-9035
Marine Mammal Center Monterey Bay Area P.O. Box 778 Moss Landing, CA 95039	831-633-6298
Elkhorn Slough Foundation Director P.O. Box 267 Moss Landing, CA 95039	831-728-5939
Moss Landing Marine Labatories Jim Harvey (marine birds and mammals) P.O. Box 450 Moss Landing, CA 95039	831-633-8669
Friends of the Sea Otter Science Director 2150 Garden Road, Suite B4 Monterey, CA 93940	831-642-9037
National Marine Fisheries Service Special Agent Southwest Enforcement 1352 Lighthouse Avenue Pacific Grove, CA 93950	831-648-8515
Santa Cruz County Office of Emergency Services 701 Ocean Street Santa Cruz, CA 95060	831-454-2210

Monterey County Sheriff
Station Commander
1414 Natividad Road
Salinas, CA 93906

831-755-3803

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-022-A **Moss Landing Inlet (a.k.a. Elkhorn Slough Entrance)**

Ospr Map No. 068

County: Monterey
USGS 7.5' QUAD: Moss Landing

Long.
Lat.

SITE DESRCIPTION:

Elkhorn Slough National Research Reserve (NOAA/CDFG), Elkhorn Slough Wildlife Area (CDFG). Extensive marshes and tidal flats (2,500 acres). Moss Landing State Beach (CDPR)

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Elkhorn Slough supports 260 species of birds including endangered Clapper Rails and Brown Pelicans. There is a Caspian Tern rookery in the south marsh. California Least Tern. Harbor Seals haulout and pup spring-summer. There are over 400 species of invertebrates including Gaper Clams, Washington Clams, and Little-Neck Clams. The endangered Santa Cruz Long Toed Salamander also lives here. Tidewater Goby (candidate species) lives here. The Bank Swallow (threatened) can be found at the inlet (NDDB). Within the salt ponds is the Mimic Tryonia plant species (candidate species, NDDB). The Monterey Indian paint brush is found at Moss Landing State Beach.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

USCG Station Monterey, 24-hour Dispatch	(831)-647-7300
USCG Marine Safety Office San Francisco Bay, 24-hour Dispatch	(510)-437-3073
Department of Fish and Game, 24-hour Dispatch	(916)-445-0045
Department of Fish and Game, Elkhorn Slough National Estuarine Research Reserve	(831) 728-2822
Elkhorn Slough Foundation, Director	(831)-728-5939
Department of Parks and Recreation	(831) 649-2810
Monterey Bay National Marine Sanctuary	(831)-647-42
Dr. Jim Harvey, Moss Landing Marine Laboratory	(831)-633-8669
Moss Landing Marine Harbor District	(831)-633-2461
Duke Energy, Moss Landing, Environmental Coordinator	(831)-633-6785
Monterey County Office of Emergency Services	(831)-755-5010

Monterey County Environmental Health	(831)-755-4511
California Coastal Commission	(415)-904-5296
U.S. Fish and Wildlife Service	(805)-644-1766
National Marine Fisheries Service	(831)-648-8515

REMARKS:

Intake for Duke Energy Power Plant. Entrance to the ecologically diverse Elkhorn Slough. Moro Cojo Slough exits through Moss Landing Harbor.

Response Strategy for Elkhorn Slough Entrance & Moss Landing Harbor

Elkhorn Slough/Bennett Slough (A N):

Approximately 2000 feet of boom is needed to protect Elkhorn Slough from an incoming pollution threat from Monterey Bay. Of particular concern is the north side of the slough which features a large mud flat and the entrance to Bennett Slough. Position two booms at the mouth of Elkhorn Slough to prevent oil from entering. Position the booms to direct the flow of oil toward the Unit 1-5 outfall and away from the mud flat; this will facilitate collection of the oil near the outfall. Secure sorbent materials to the back side of the boom to arrest any sheen which may escape.

Pajaro River and Watsonville Slough (B N):

Approximately 1000 feet of boom is needed to protect Pajaro River and Watsonville Slough. Position a series of deflection booms at the mouth of the confluence. Establish a double barrier array behind the boom. Secure sorbent materials to the back side of each to arrest any sheen.

Soquel Creek (C N):

Approximately 1000 feet of boom is needed to protect the fish spawning area and Soquel Creek. Deploy deflection booms to channel oil away from those fish spawning and Pismo clam areas at Capitola State Beach and Soquel Creek. This series of booms requires additional line anchors. Deploy a double barrier boom across the creek mouth. Secure sorbent materials to the back side at the centers and ends of each boom.

Moro Cojo Slough (A):

Approximately 1000 feet of boom is needed to protect the Moro Cojo Slough and the Old Salinas River. Deploy one barrier boom across those waterways using pre-established anchor points. Secure sorbent materials behind the boom to arrest any sheen.

Salinas River (B):

Approximately 1000 feet of boom is needed to protect the mouth of the Salinas River. The opening to the ocean is relatively small compared to the length of the internal shoreline. The Salinas River is a shallow, low energy system with marsh and tidal flats, and is directly adjacent to the Salinas National Wildlife Refuge. Deploy oceanside deflection boom arrays to prevent oil from approaching the mouth of the river, and a double or triple barrier boom to prevent oil from entering. Secure sorbent materials behind the booms to arrest any entrained oil or sheen which may escape.

INLET SKETCH MAP

Inlet Name MOSS LANDING INLET, CA.

Recorder(s) MDH/TMM/KM

Date/Time 8 NOV. 1992; 1015

Tide Stage HIGH @ 0809 (+5.4); MOSS LANDING

Inlet Classification A

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

XXXXXXX — Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

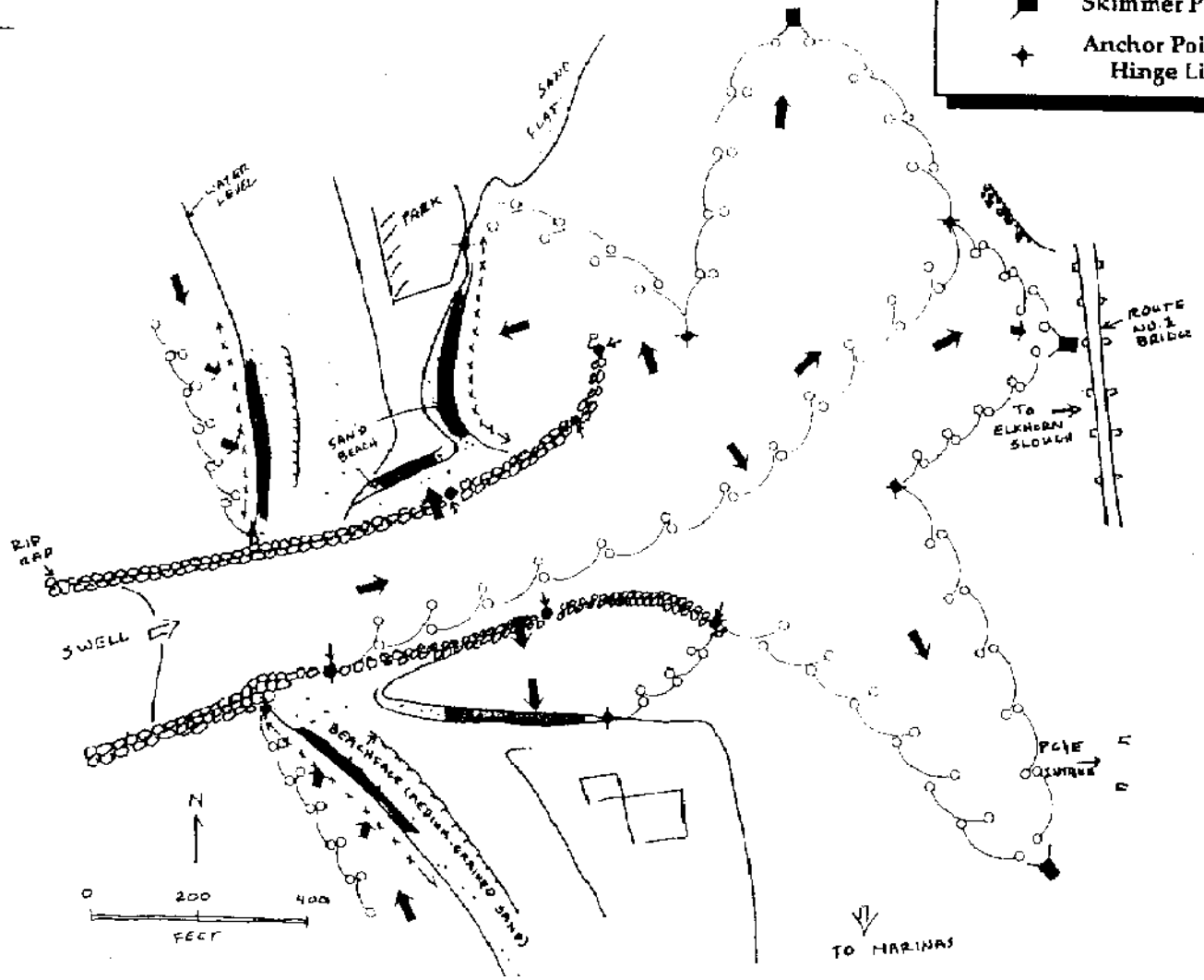
High-Tide Overwash Zone

Last High-Tide Swash Line

ESTABLISHED BOOM ANCHOR POINT

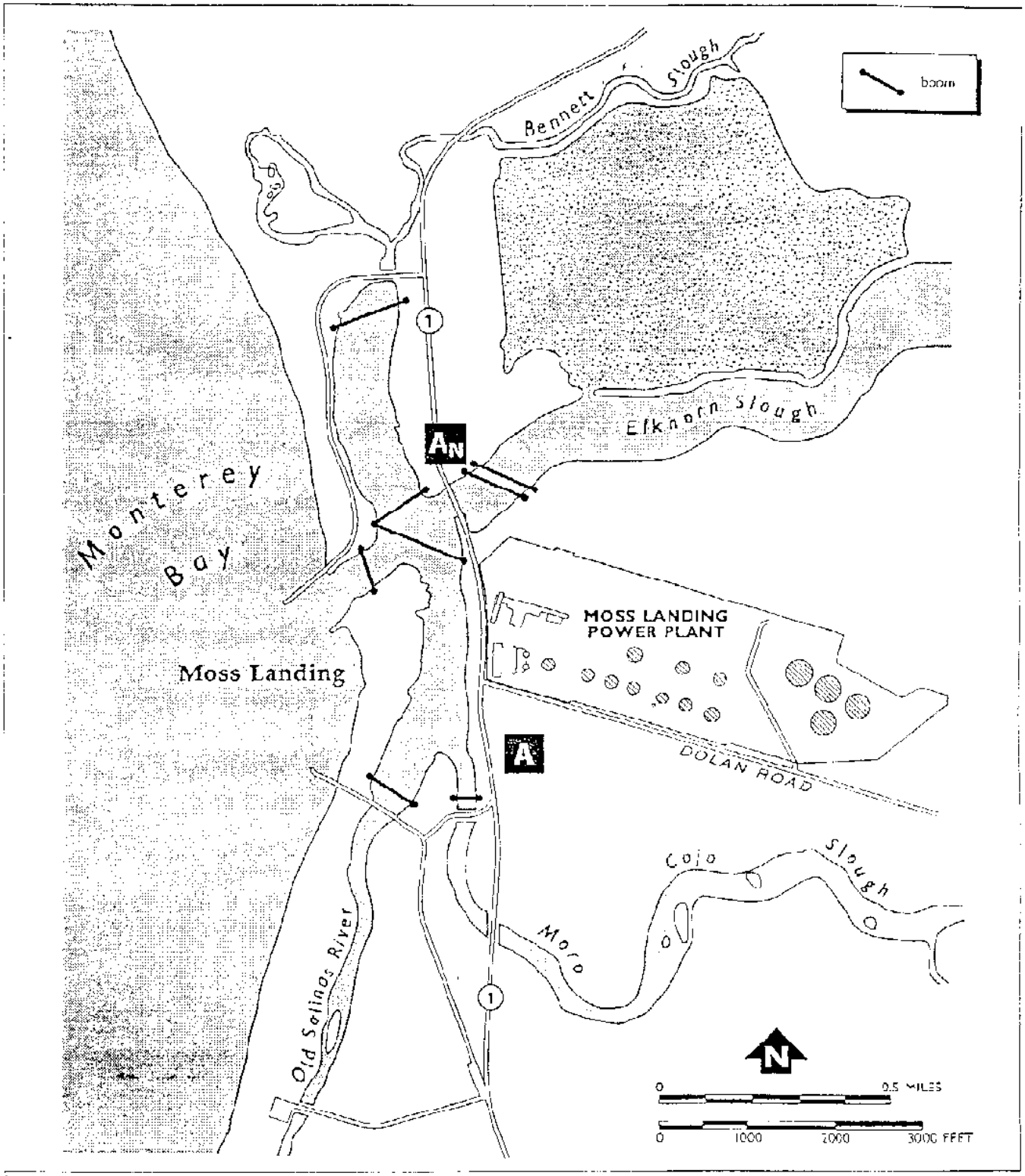
POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- Skimmer Placement
- Anchor Point / Hinge Line



9974.2-36

BOOM DEPLOYMENT STRATEGIES
Flood Tide



Central Coast
Monterey County
9974.2-37

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-023-C **Salinas River State Beach** Ospr Map No. 068

County: Monterey Lat.
USGS 7.5' Quad: Moss Landing Long.

SITE DESCRIPTION:

Fine to medium grain sandy beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

This beach is nesting habitat for snowy plovers (threatened). Other shore and seabirds are also present. Pismo Clams can be found. Squid spawn just off-shore during spring and summer months. The north end of this beach is habitat for the black legless lizard (candidate species). The short eared owl can be found at the mouth of the Salinas River (NDDB). On the dunes, the plant species, Monterey Gilia (endangered), can be found.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

High recreational use. The entrance to the ecologically diverse Elkhorn Slough is directly adjacent to the Salinas River State Beach.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-024-A **Eastern Elkhorn Slough** Ospr Map No. 069

County: Monterey Lat.
USGS 7.5" Quad: Prundale Long.

SITE DESCRIPTION:

Elkhorn Slough is a salt-water estuary with seasonal freshwater input from winter storms. It joins Monterey Bay through the entrance to Moss Landing Harbor, a rip-rapped channel. The Slough is over seven miles long, roughly shaped like the letter "S". It includes the Elkhorn Slough National Research Reserve (NOAA/CDFG) and the Elkhorn Slough Wildlife Area (CDFG). The area covers extensive marshes and tidal flats (2,500 acres).

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Elkhorn Slough supports 260 species of birds, and over 400 species of invertebrates including endangered Clapper Rail, Brown Pelican, Santa Cruz Long Toed Salamander, and the Salinas Harvest Mouse.

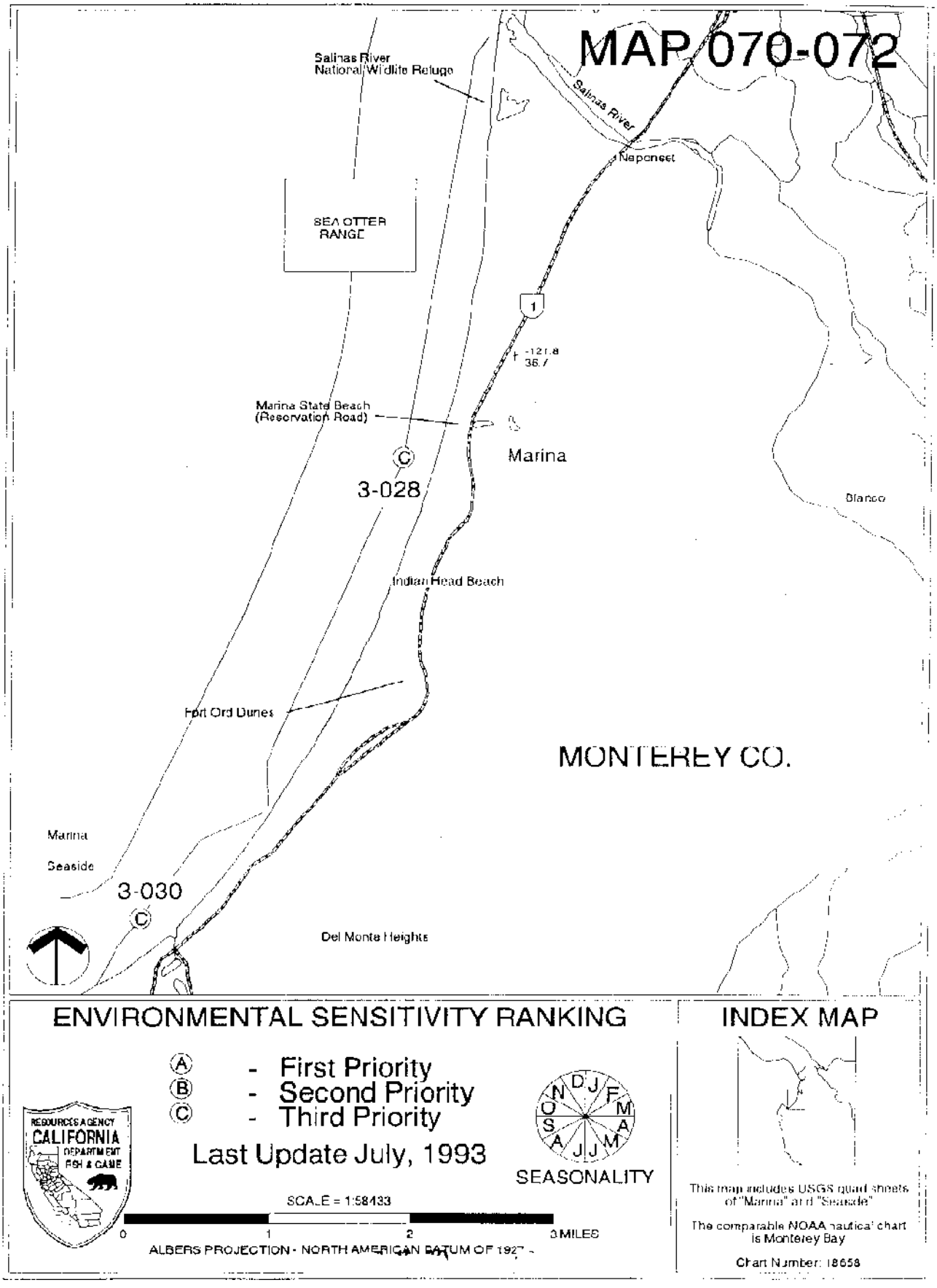
TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

USCG Station Monterey, 24-hour Dispatch (831)-647-7300
USCG Marine Safety Office San Francisco Bay, 24-hour Dispatch (510)-437-3073
Department of Fish and Game, 24-hour Dispatch (916)-445-0045
Department of Fish and Game, Elkhorn Slough National Estuarine Research Reserve
(831) 728-2822
Elkhorn Slough Foundation, Director (831)-728-5939
Department of Parks and Recreation (831) 649-2810
Monterey Bay National Marine Sanctuary (831)-647-42
Dr. Jim Harvey, Moss Landing Marine Laboratory (831)-633-8669
Moss Landing Marine Harbor District (831)-633-2461
Duke Energy, Moss Landing, Environmental Coordinator (831)-633-6785
Monterey County Office of Emergency Services (831)-755-5010
Monterey County Environmental Health (831)-755-4511
North Monterey County Fire (831)-633-2578
Salinas Fire Department (831)-758-7261

California Coastal Commission (415)-904-5296
U.S. Fish and Wildlife Service (805)-644-1766
National Marine Fisheries Service (831)-648-8515
If railroad incident, Union Pacific Railroad (510)-891-7729

REMARKS:

None.



Central Coast
Monterey County
9974.2-43

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-028-A **Marina State Beach** Ospr Map No. 070

County: Monterey Lat.
USGS 7.5" Quad: Marina Long.

SITE DESCRIPTION:

Marina State Beach. Fine to medium grain sandy beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Plant species of concern include: Menzies' Wallflower (endangered), Monterey Spineflower (candidate species), Monterey Gilia (endangered). Birds include Snowy Plover (threatened) and other shorebirds. The Black Legless Lizard (candidate species) can be found near Marina State Beach parking lot, near the southern boundary of Fort Ord (NDDB).

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-029-A **Salinas River Inlet** Ospr Map No. 068

County: Monterey Lat.
USGS 7.5' Quad: Moss Landing Long.

SITE DESCRIPTION:

Well developed marsh on banks of river. The inlet is partly within the Salinas National Wildlife Refuge (south side of inlet) and the Salinas River State Beach (north side of inlet). Designated a State Natural Preserve.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Large numbers of birds, including waders, waterfowl, seabirds and shorebirds such as the endangered Brown Pelican, and threatened Snowy Plover can be found. Steelhead Trout are in this anadromous stream. Also, Smith's Blue butterfly, Black legless lizard, Dune gila. Plants: Monterey spine flower, Monterey Indian paintbrush.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

California Department of Parks and Recreation (831) 649-2810
U.S. Fish and Wildlife Service, King City

REMARKS:

INLET ETCH MAP

SALINAS RIVER

Inlet Name INLET, CA.

Recorder(s) MDH WTMM

Date/Time 3 NOV. 1992; 0900

Tide Stage HIGH 0.8H (+5.6); MONTEREY BAY

Inlet Classification C

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

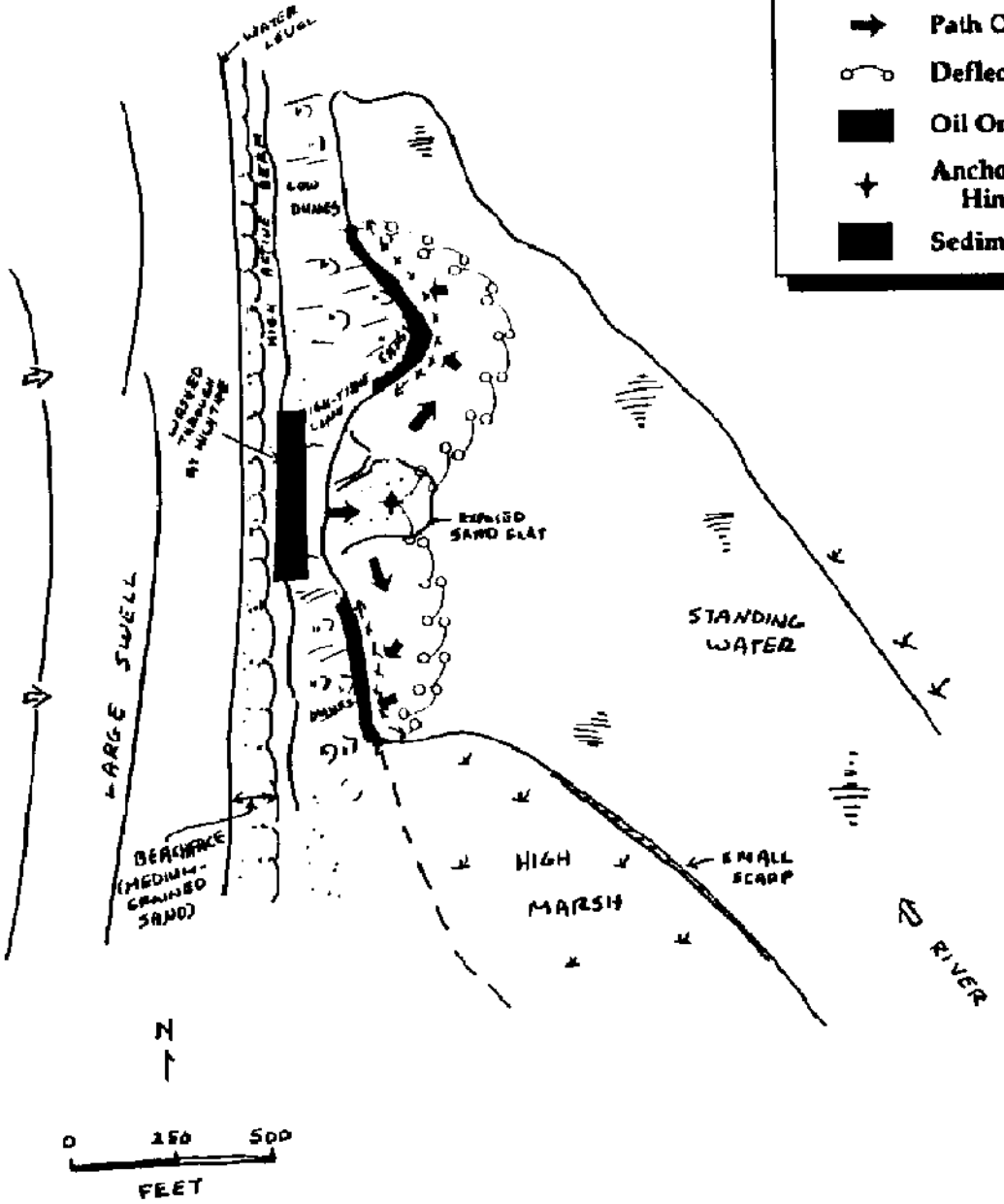
Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- Anchor Point / Hinge Line
- Sediment Dike

Monterey County
9974.2-48

SITE SUMMARY SHEET

SITE: CC-030-A **Monterey Bay Dunes** Ospr Map No. 072

County: Monterey Lat.
USGS 7.5" Quad: Seaside Long.

SITE DESCRIPTION:

Monterey Bay Dunes, west of the city of Seaside. This is fine to medium grained sandy beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

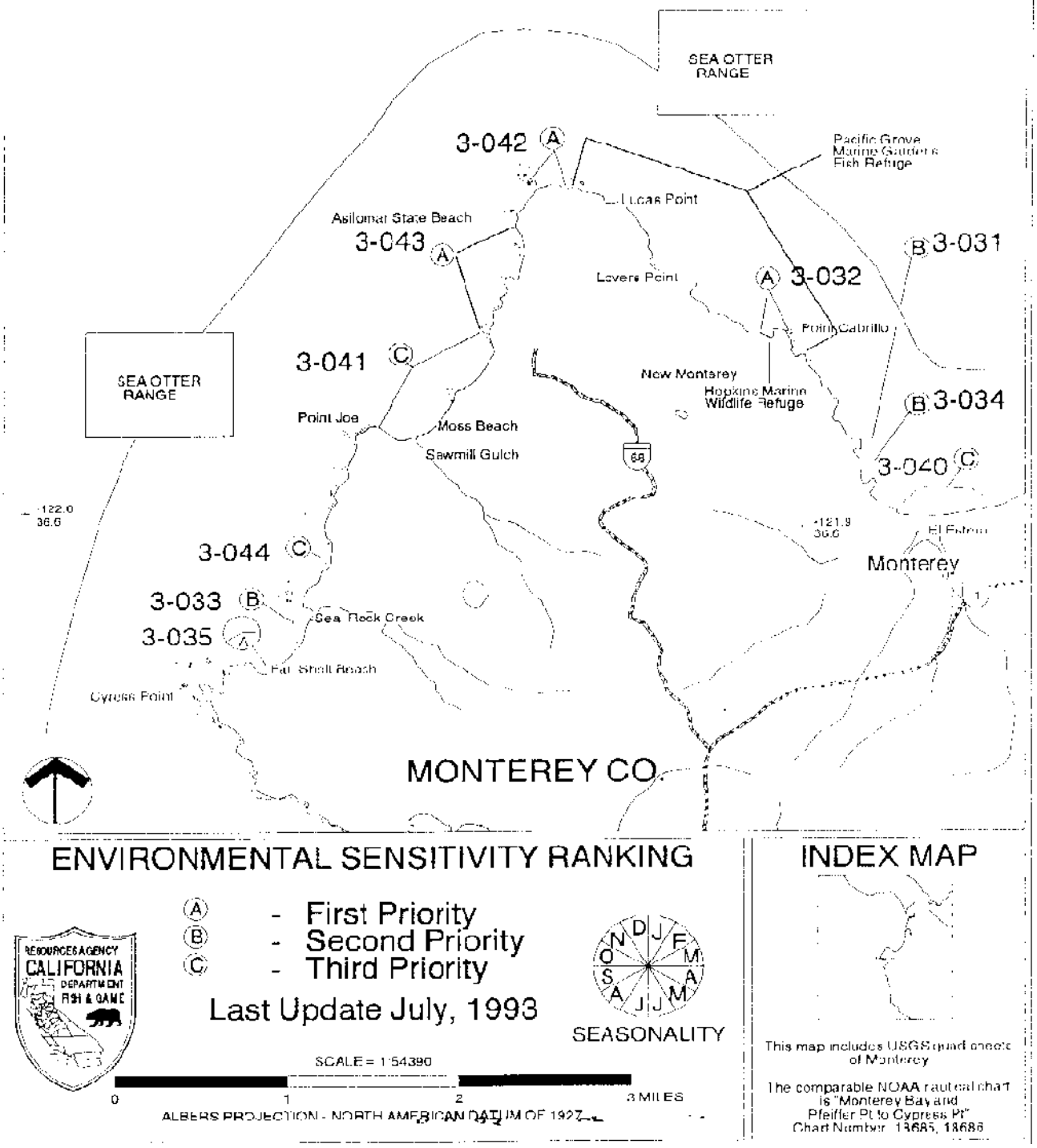
RESOURCES OF PRIMARY CONCERN:

Snowy Plovers (threatened) utilize this beach, as well as other shore and seabirds such as Willets and Sanderlings. Squid spawn offshore during spring and summer. The Black Legless Lizard (candidate species) also utilizes this area. Plant species include the Monterey Spineflower (proposed endangered), and the Monterey Gilia (endangered, NDDB).

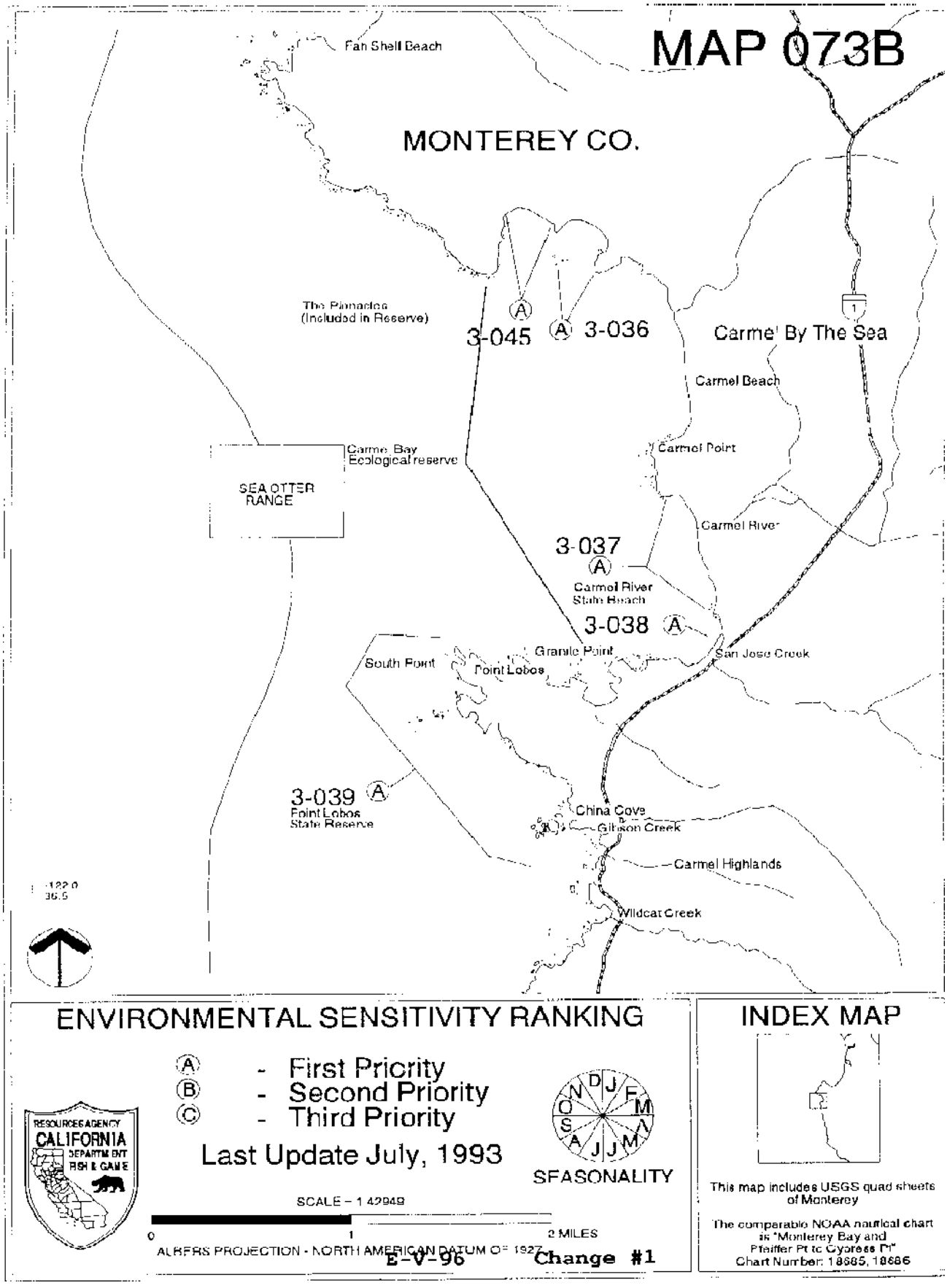
TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

MAP 073A



Central Coast
Monterey County
9974.2-50


MAP 073B
MONTEREY CO.
Fish Shell Beach
The Pinnacles
(Included in Reserve)
3-045
A
3-036
A
Carmel By The Sea
Carmel Beach
Carmel Point
Carmel Bay
Ecological reserve
SEA OTTER
RANGE
Carmel River
3-037
A
Carmel River
State Beach
3-038
A
Granite Point
South Point
Point Lobos
San Jose Creek
3-039
A
Point Lobos
State Reserve
China Cove
Gibson Creek
Carmel Highlands
Wildcat Creek
122.0
36.5
ENVIRONMENTAL SENSITIVITY RANKING
A - First Priority
B - Second Priority
C - Third Priority
Last Update July, 1993
RESOURCES AGENCY
CALIFORNIA
DEPARTMENT
FISH & GAME
SEASONALITY
SCALE – 1 42949
0
1
2 MILES
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927
E-V-96
Change #1
INDEX MAP
This map includes USGS quad sheets of Monterey
The comparable NOAA nautical chart is "Monterey Bay and Pfeiffer Pt to Cypress Pt" Chart Number: 18685, 18686

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-031-A **Coast Guard Jetty in Monterey Bay** Ospr Map No. 073

County: Monterey Lat. 36 37'
USGS 7.5" Quad: Monterey Long. 121 54'

SITE DESCRIPTION:

Coast Guard Jetty in Monterey Bay.

SEASONAL CONCERNS:

High numbers August-March, and moderate numbers year round.

RESOURCES OF PRIMARY CONCERN:

California Sea Lions haulout. 2,000 animals have been observed here. Endangered Brown Pelicans are also present.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Monterey Coast Guard (831) 647-7300

REMARKS:

INLET SKETCH MAP

Inlet Name CARMEL RIVER INLET, CA.

Recorder(s) MDH / TMM

Date/Time 3 NOV. 1992, 0700

Tide Stage HIGH @ 0826 (4.5 ft) CARMEL COVE

Inlet Classification C

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

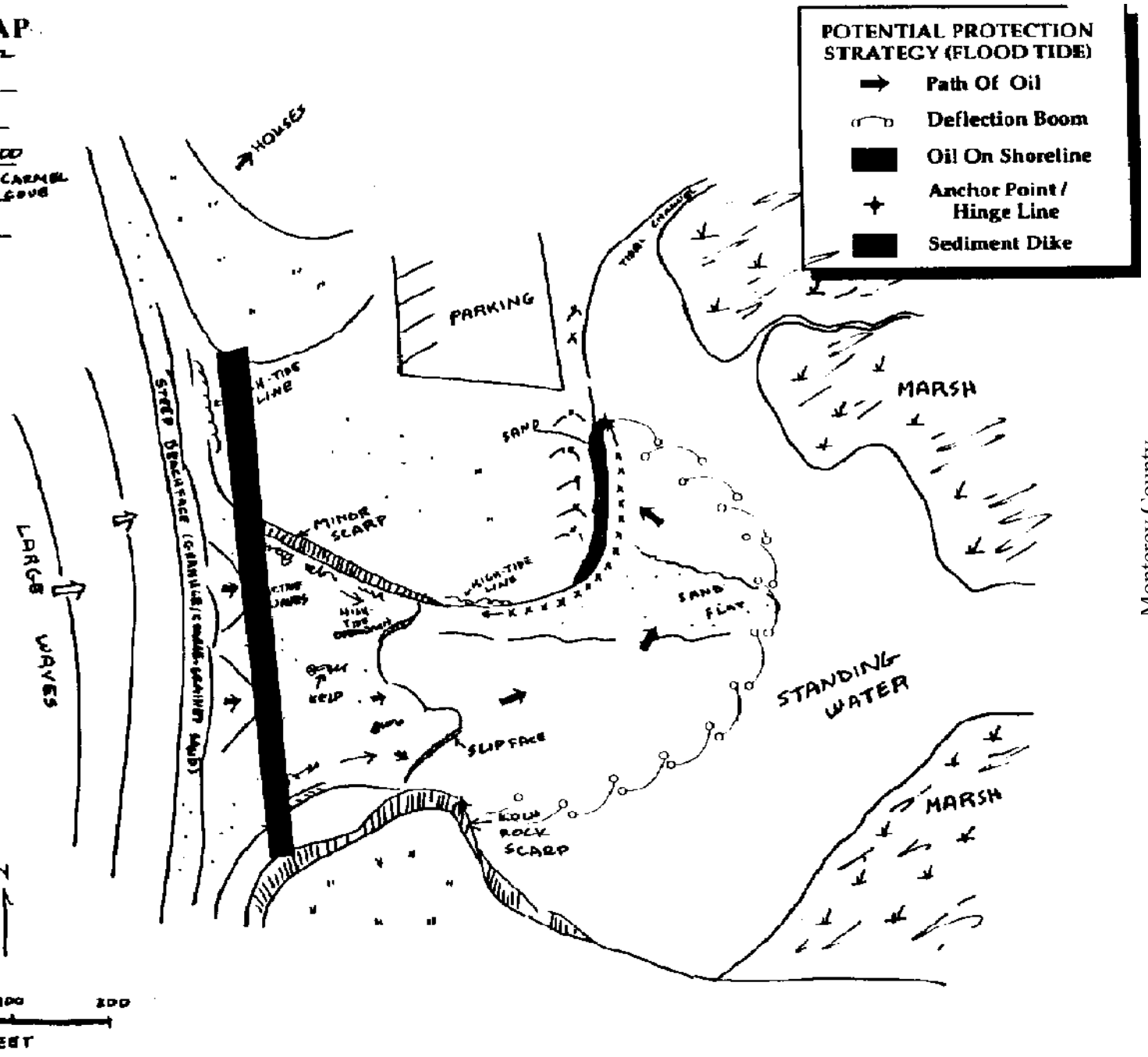
Recommended Oil-Catchment Area

Salt-Water Marsh

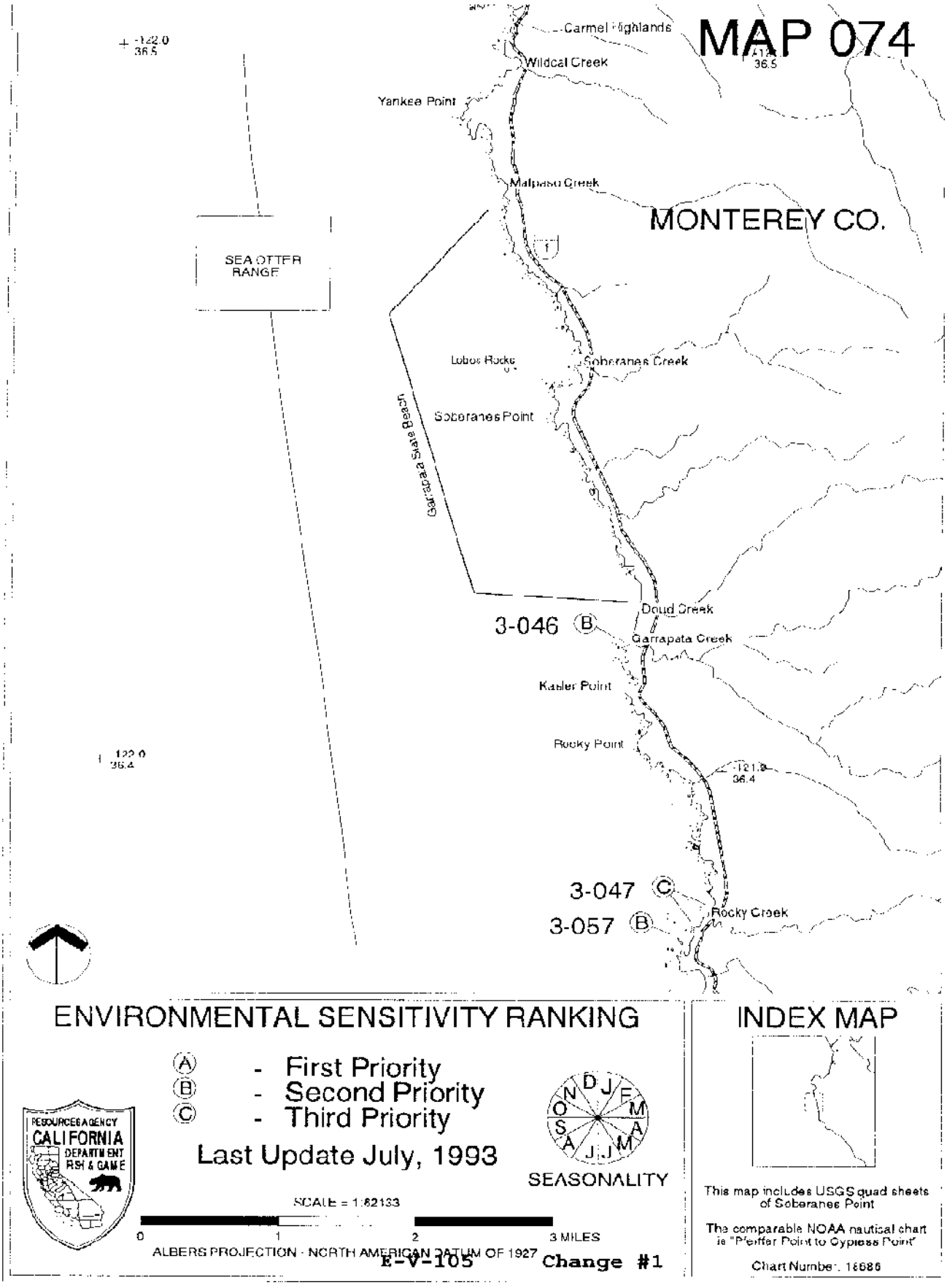
Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



Monterey County
9974.2-54



Central Coast
Monterey County
9974.2-55

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-032-A **Point Cabrillo** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Point Cabrillo, a wave-cut platform.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

A large population of Harbor Seals haul out on this wave-cut platform.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-033-A **Bird Rock and Seal Rock** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Bird Rock and Seal Rock in between Point Joe and Cypress Point.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Large numbers of California Sea Lions haulout in this area. Harbor Seals and Steller Sea Lions also haul out offshore. Endangered Brown Pelicans and Cormorants are also in this area.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-034-A **Monterey Harbor Entrance** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Monterey Harbor Entrance.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Seabirds are abundant, including the endangered Brown Pelican, Western Grebes and Cormorants.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Monterey Marina - Harbor Master (831) 646-3950

REMARKS:

INLET SKETCH MAP

MONTEREY HARBOR

Inlet Name ENTRANCE, CA.

Recorder(s) MOH/TMM

Date/Time FROM AERIAL PHOTOGRAPH

Tide Stage —

Inlet Classification B

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

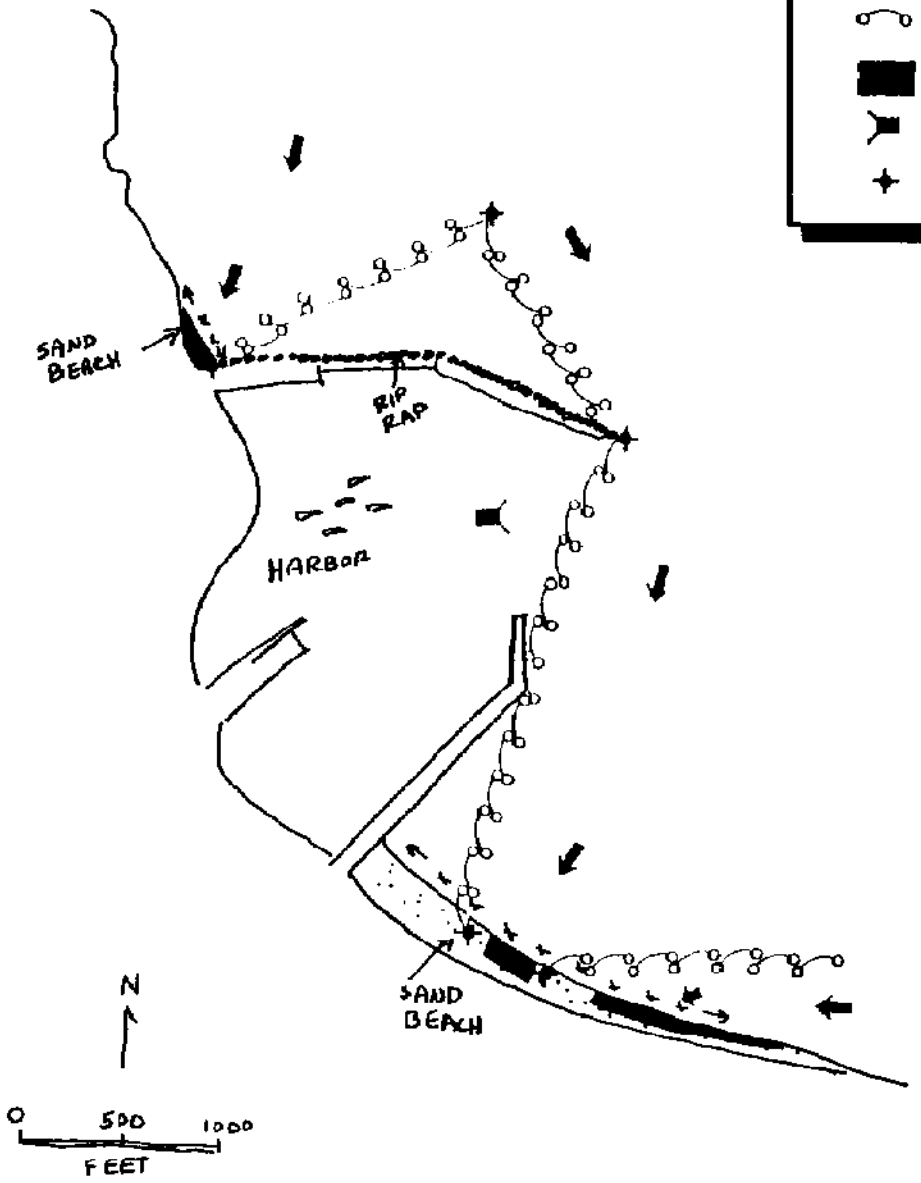
⟵XXXXXXX⟶ Recommended Oil-Catchment Area

Salt-Water Marsh

Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line



POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- Skimmer Placement
- Anchor Point / Hinge Line

SITE SUMMARY SHEET

SITE: CC-035-A **Fan Shell Beach** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5' Quad: Monterey Long.

SITE DESCRIPTION:

This is a sandy beach fronted by a wave-cut platform.

SEASONAL CONCERNS:

This is an **A** site during spring and summer; otherwise it has a **B** priority.

RESOURCES OF PRIMARY CONCERN:

Harbor Seal pup beach. Also, the Black Legless Lizard (candidate species), and the endangered plant species Menz Wallflower can be found. Clover Lupine (endangered) can be found near the ocean as well as in stabilized dunes.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Private Ownership - Pebble Beach Co. (831) 625-8452

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-036-A **Offshore Pescadero Rocks** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Offshore Pescadero Rocks, and Arrowhead Point, a wave-cut platform.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Large numbers of Harbor Seal haulouts.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-038-A **San Jose Creek Inlet** Ospr Map No. 073

County: Monterey Lat
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

San Jose Creek Inlet. Small marsh system.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Shorebirds and seabirds including the endangered Brown Pelican. Sea Otters offshore.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

Site of Carmel River State Beach. High recreational use.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-039-A **Point Lobos** Ospr Map No. 073

County: Monterey Lat. 36 31'
USGS 7.5" Quad: Monterey Long. 121 56'

SITE DESCRIPTION:

Point Lobos.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

California Sea Lions haulout year round. There are numerous seabirds including the endangered Brown Pelicans (nests on Bird Island), and Cormorants. Black Swifts (DFG species of special concern, NDDB), can be found in the cliffs.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

Site of Point Lobos State Reserve.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-040-A **Monterey State Beach** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Monterey State Beach, a fine to medium grain sandy beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Black Legless Lizard (candidate species) utilizes the dune habitat. Listed and sensitive plant species include Gilia tenuiflora, Menzies wallflower, and Corizanthe purgens.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-041-A **Spanish Bay and Moss Beach** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Spanish Bay and Moss Beach. Fine to medium grain sandy beaches.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

The Black Legless Lizard (candidate species) utilizes the dune habitat. Jones Layia (candidate plant species) can be found in the dunes/chaparral communities. Clover Lupine (endangered) can be found near the ocean as well as in the dunes. The Monterey Gilia (endangered) is another dune plant species.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-042-A **Sand Hills, at Point Pinos** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Sand Hills, at Point Pinos.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Plant species Beach Layia, and Menzies' Wallflower, both endangered, are dune plants (NDDB). The endangered Clover Lupine grows near the ocean and on stabilized dunes. Monterey Spineflower is proposed endangered.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-043-A **Asilomar State Beach** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Asilomar State Beach. Fine to medium grain sandy beach, fronted by wave-cut platform.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Black Legless Lizard (candidate species) lives in the dunes. Menzies' Wallflower is an endangered dune plant species. Sandmat Manzanita (candidate species) is also a dune plant. Clover Lupine (endangered) grows in the dunes and near the ocean.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

High recreational use.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-044-C **Sandy Beach** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5' Quad: Monterey Long.

SITE DESCRIPTION:

Sandy beach with wave-cut platform offshore.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Coastal dune plant, milk vetch (endangered, NDDB), grows in this area.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

Private ownership - Pebble Beach Co. (831) 625-8452

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-045-A **Pebble Beach** Ospr Map No. 073

County: Monterey Lat.
USGS 7.5" Quad: Monterey Long.

SITE DESCRIPTION:

Pebble Beach. This beach is fronted by a wave-cut platform.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Clover Lupine (endangered, NDDB) can grow near the ocean as well as on the stabilized dunes.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-046-A **Garrapata Creek Inlet** Ospr Map No. 074

County: Monterey Lat.
USGS 7.5" Quad: Soberanes Point Long.

SITE DESCRIPTION:

Garrapata Creek Inlet. Small marsh.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

There are shorebirds and seabirds, including the endangered Brown Pelican. Sea Otters are offshore Steelhead Trout spawn upstream. Also in this area is the Little Sur Manzanita (candidate plant species, NDDB), a coastal bluff species.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-047-A **Sea Bluffs and Rocky Creek** Ospr Map No. 074

County: Monterey Lat.
USGS 7.5" Quad: Sobranes Point Long.

SITE DESCRIPTION:

Sea Bluffs and Rocky Creek.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Little Sur Manzanita (candidate species, NDDB) is a bluff plant species.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-048-A **Little Sur River Inlet and Beach** Ospr Map No. 075

County: Monterey Lat.
USGS 7.5' Quad: Point Sur Long.

SITE DESCRIPTION:

Small pond and cow pasture behind inlet.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

There are shorebirds and seabirds including the endangered Brown Pelican and threatened Snowy Plovers. Sea Otters present offshore. Anadromous stream for Steelhead Trout and Tidewater Goby (candidate species).

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

Big Sur Ranch (Jim Hill - owner)

REMARKS:

Private property. Contact Big Sur Ranch for access information.

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-049-C **Point Sur** Ospr Map No. 075

County: Monterey Lat.
USGS 7.5" Quad: Point Sur Long.

SITE DESCRIPTION:

Point Sur, an exposed rocky cliff with sandy beach to the north and south.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Pacific Harbor Seals haulout year round. From May-June, 800 animals have been observed here. In the first small cove just south of Point Sur, there is an elephant Seal haulout area. Black Swifts (DFG species of special concern, NDDB) can be found in the cliffs.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

Site of Point Sur Lighthouse.

INLET SKETCH MAP

LITTLE SUR RIVER

Inlet Name INLET, CA.

Recorder(s) MOH/TMM

Date/Time 7 NOV 1992; 1645

Tide Stage LOW @ 1449 (4.0 ft); CARMEL CODE

Inlet Classification C

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

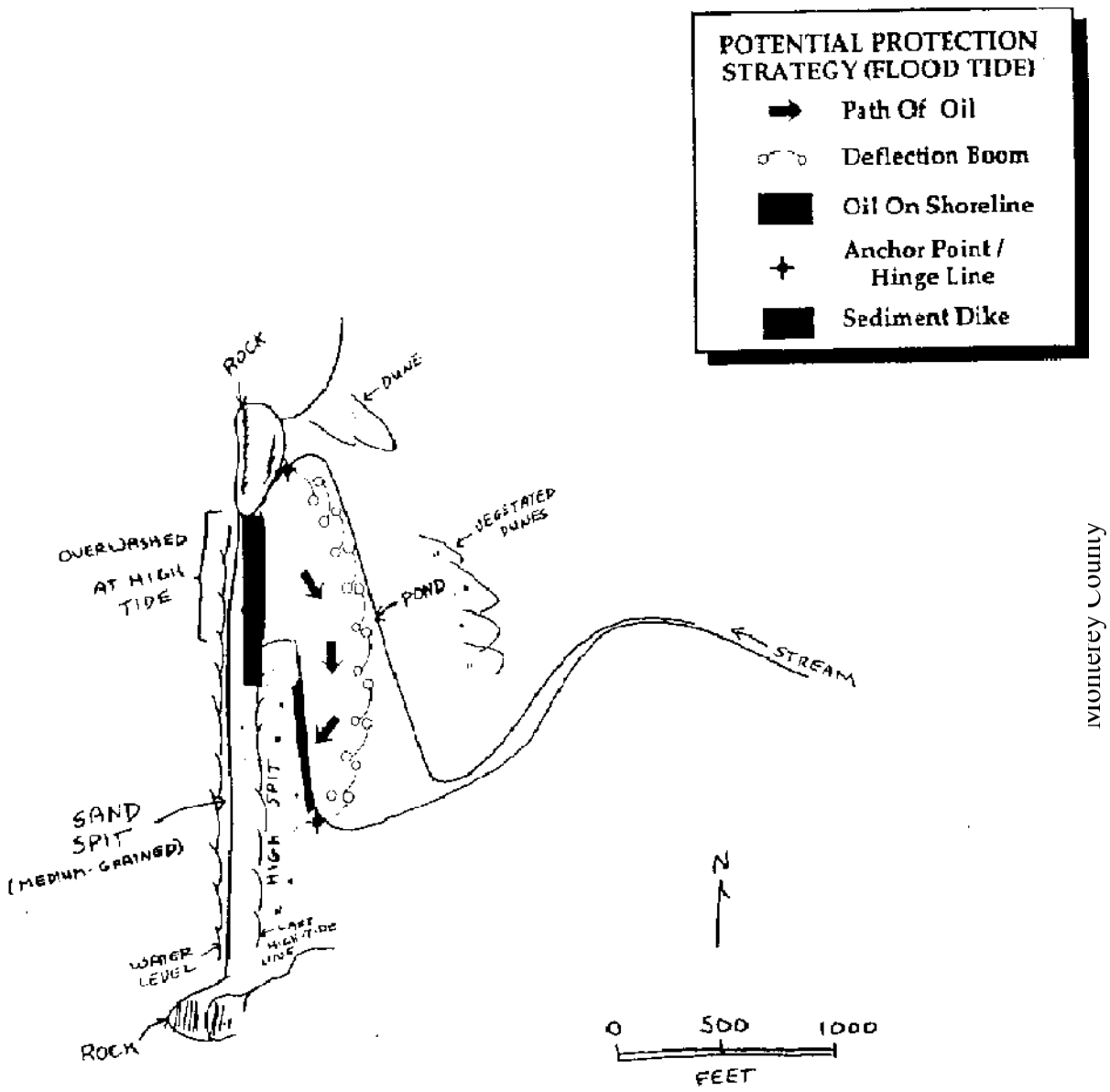
⟵XXXXXXX⟶ Recommended Oil-Catchment Area

V V Salt-Water Marsh

Fresh-Water Marsh

➡ ➡ High-Tide Overwash Zone

Last High-Tide Swash Line



Monterey County
9974.2-90

SITE SUMMARY SHEET

SITE: CC-050-A **Point Sur Beach** Ospr Map No. 075

County: Monterey Lat.
USGS 7.5" Quad: Point Sur Long.

SITE DESCRIPTION:

Point Sur Beach. Fine to medium grain sandy beach.

SEASONAL CONCERNS:

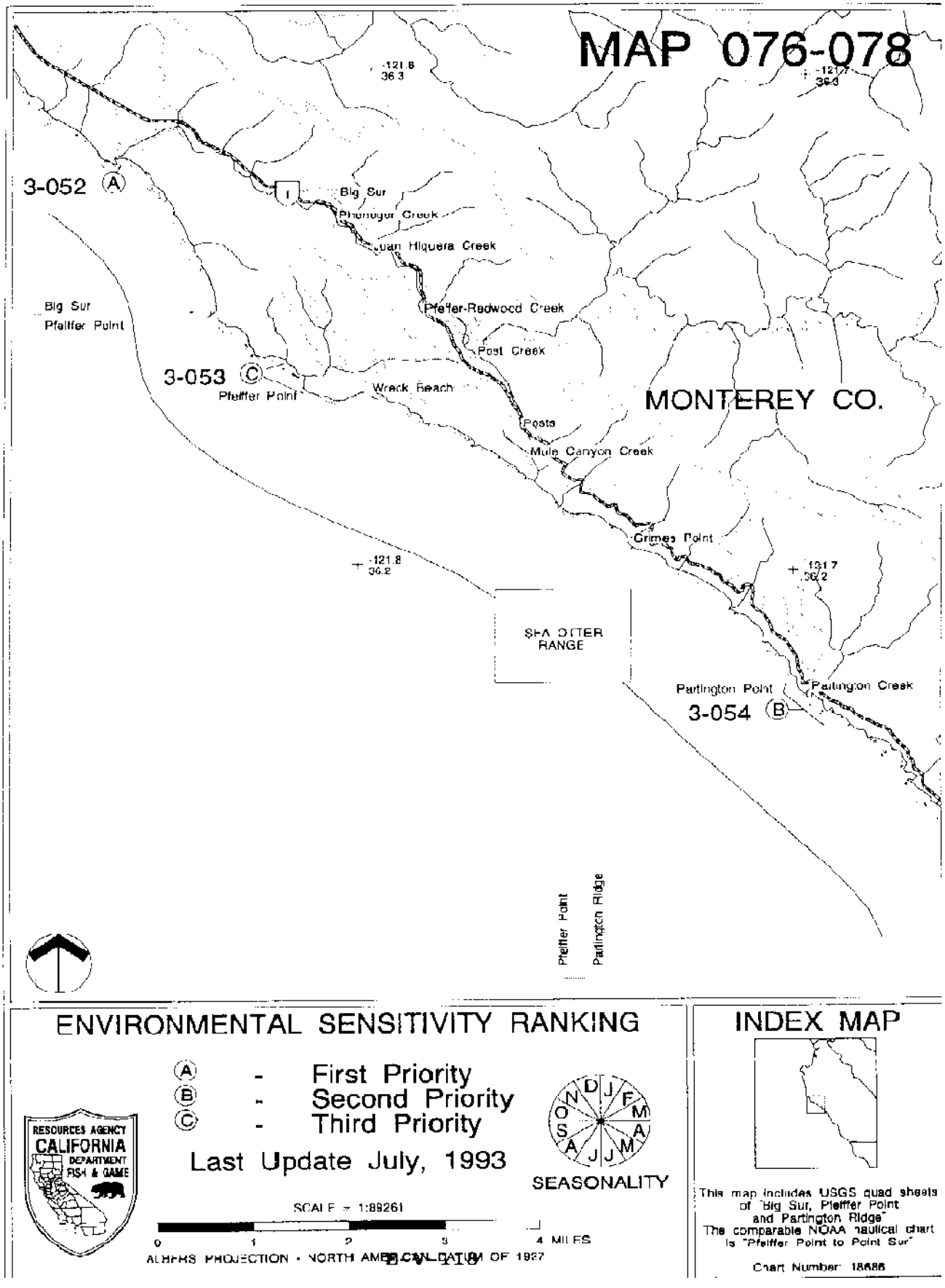
Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Western Snowy Plovers (threatened) can be found as well as other shore and seabirds including Cormorants and endangered Brown Pelicans.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:



Central Coast
Monterey County
9974.2-92

SITE SUMMARY SHEET

SITE: CC-051-B **Rocks Off Hurricane Point** Ospr Map No. 075

County: Monterey Lat.
USGS 7.5' Quad: Point Sur Long.

SITE DESCRIPTION:

Offshore rocks with moderate to high-energy ocean waves.

SEASONAL CONCERNS:

Species of concern discussed below are present year round except for tufted puffins.

RESOURCES OF PRIMARY CONCERN:

Brandt's cormorants, western gulls, common murres, pigeon guillemots, and tufted puffins (haven't been observed in the last few years) roost and nest on these offshore rocks. Tufted puffins enter colonies in May, lay eggs April-August. Eggs hatch 30 days after they are laid; birds leave colonies 60 days after hatching. Peak numbers are in January and February.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-052-A **Big Sur River Inlet** Ospr Map No. 076

County: Monterey Lat.
USGS 7.5' Quad: Big Sur Long.

SITE DESCRIPTION:

Fringing freshwater marsh along banks of stream.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Anadromous stream for Steelhead Trout. Shorebirds and seabirds, including endangered Brown Pelicans present. Sea Otters present off-shore.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

California Dept. Parks and Recreation (831) 649-2810

REMARKS:

High recreational use. Within Andrew Molera State Park. Four-wheel drive access almost to river mouth.

INLET SKETCH MAP

BIG SUR RIVER

Inlet Name INLET, CA.

Recorder(s) MDH/TMM

Date/Time 7 NOV. 1998; 1558

Tide Stage LOW @ 1449 (4.0 ft); CARMEL COVE

Inlet Classification C

CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

LEGEND

Recommended Oil-Catchment Area

Salt-Water Marsh

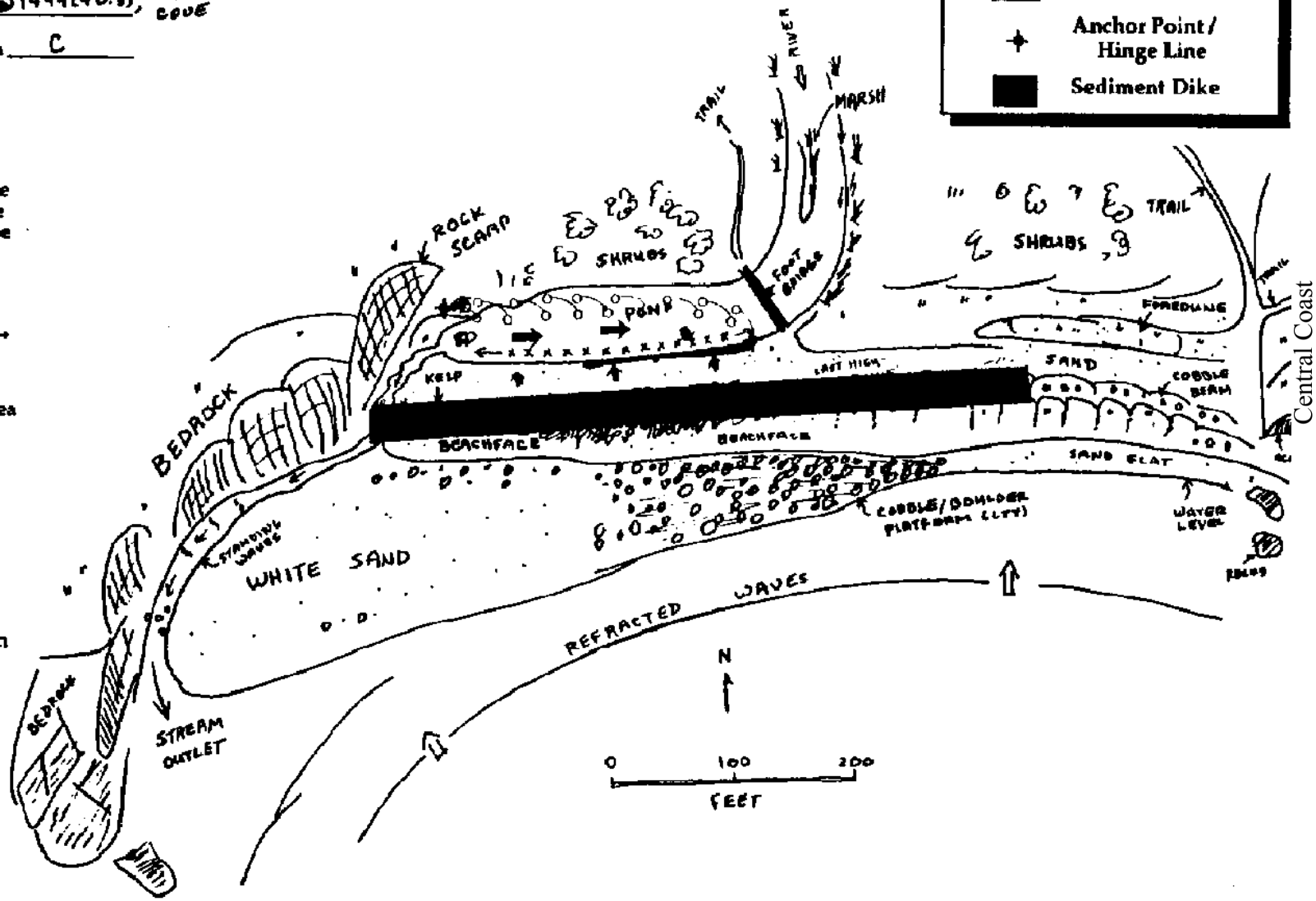
Fresh-Water Marsh

High-Tide Overwash Zone

Last High-Tide Swash Line

POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- Anchor Point / Hinge Line
- Sediment Dike



Central Coast
Monterey County
9974.2-96

SITE SUMMARY SHEET

SITE: CC-053-A **Pfeiffer Beach** Ospr Map No. 077

County: Monterey Lat.
USGS 7.5" Quad: Pfeiffer Point Long.

SITE DESCRIPTION:

In the vicinity of Pfeiffer Beach and on Pfeiffer Point.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Little Sur Manzanita (candidate species) is a coastal bluff scrub plant species.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-054-B **Partington Point and South** Ospr Map No. 078

County: Monterey Lat.
USGS 7.5' Quad: Partington Ridge Long.

SITE DESCRIPTION:

Sheer cliffs and small rocky beach.

SEASONAL CONCERNS:

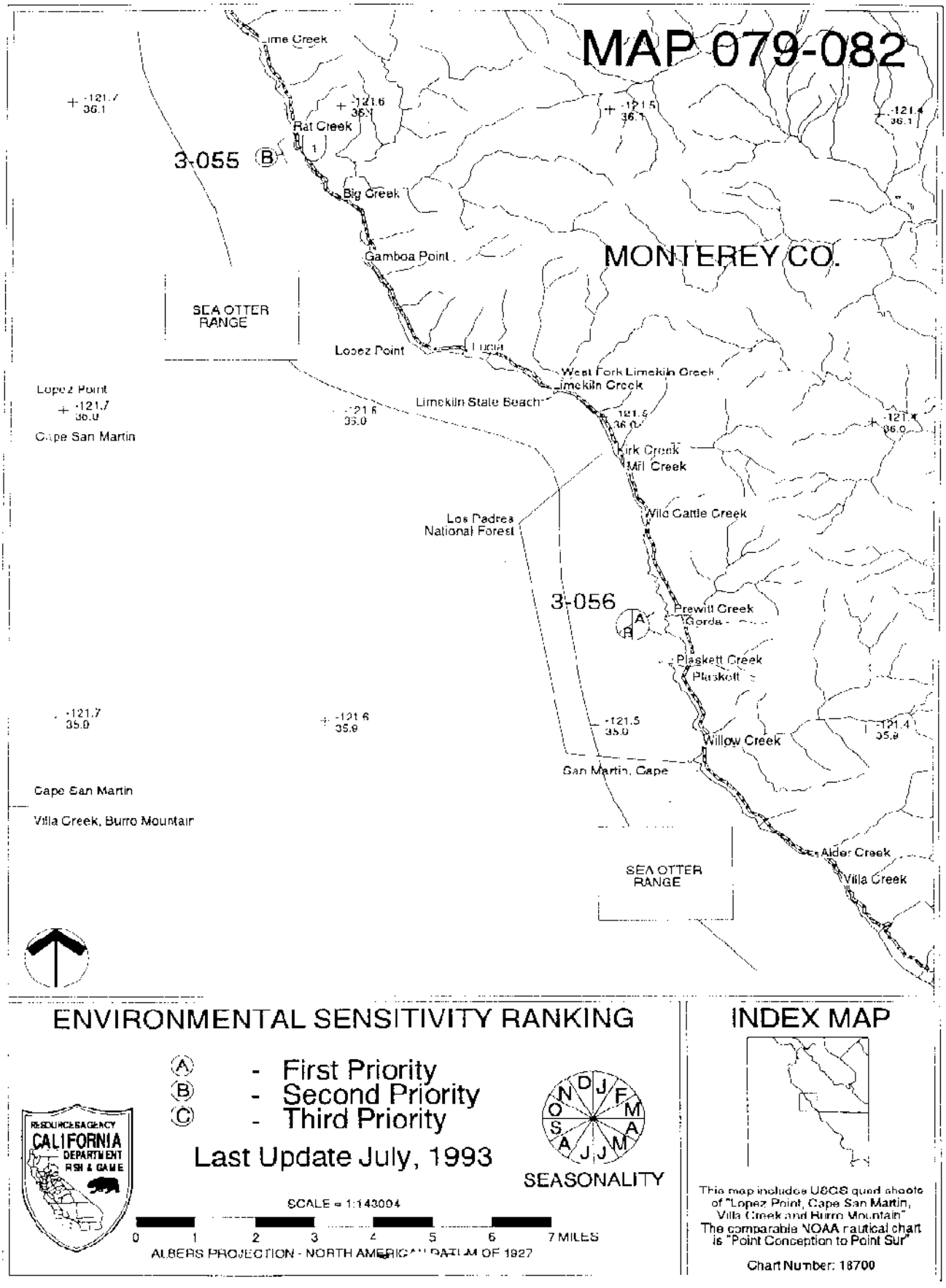
Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

This area is a rookery for double crested cormorants (DFG species of special concern). These birds nest in coastal cliffs.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:



Central Coast
Monterey County
9974.2-100

SITE SUMMARY SHEET

SITE: CC-055-B **Dolan Rock Area** Ospr Map No. 079

County: Monterey Lat. 36 05'
USGS 7.5' Quad: Lopez Point Long. 121 37'

SITE DESCRIPTION:

Rocky area with moderate- to high-energy ocean waves.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Pacific harbor seals. During the months of May-June, 400 animals have been observed here.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-056-A **Gorda Beaches** Ospr Map No. 080

County: Monterey Lat.
USGS 7.5' Quad: Cape San Martin Long.

SITE DESCRIPTION:

Beaches fronted by wave-cut platform, near the town of Gorda.

SEASONAL CONCERNS:

Rookery December-March (Priority A); haulout July-Aug. (Priority B).

RESOURCES OF PRIMARY CONCERN:

Northern Elephant Seals.

TRUSTEE AGENCY/MANAGER(M)/LOCAL EXPERTS :

U.S. Forest Service

REMARKS:

This Page Intentionally Blank

SITE SUMMARY SHEET

SITE: CC-057-B **Castle Rock** Ospr Map No. 074

County: Monterey Lat.
USGS 7.5' Quad: Sobranes Point Long.

SITE DESCRIPTION:

Offshore rock with moderate- to high-energy ocean waves.

SEASONAL CONCERNS:

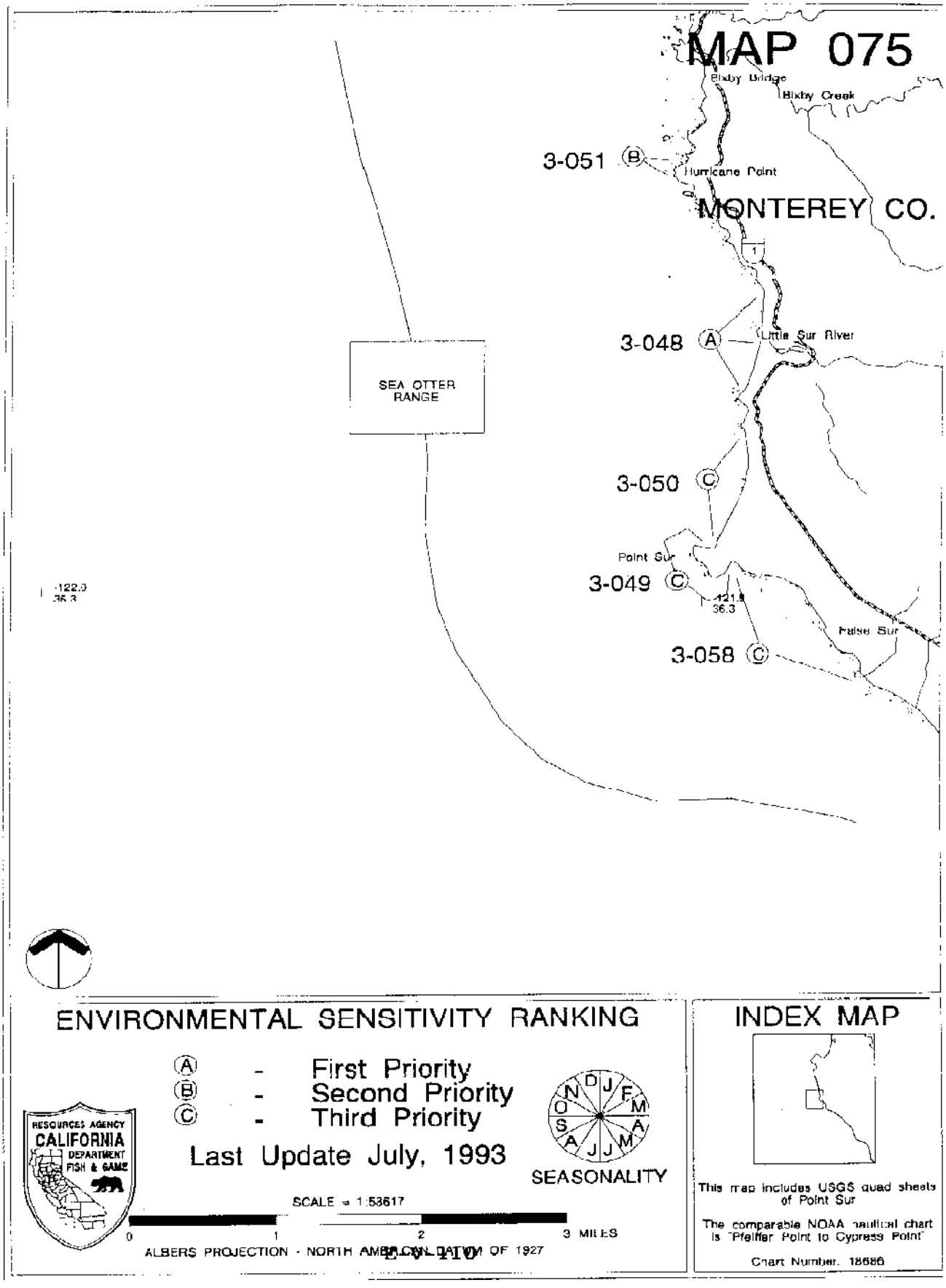
Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Large numbers of Brandt's cormorants, common murres, and pelagic cormorants roost and nest on this rock.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:



Central Coast
Monterey County
9974.2-106

SITE SUMMARY SHEET

SITE: CC-058-A **Sandy beach south of Point Sur** Ospr Map No. 075

County: Monterey Lat.
USGS 7.5" Quad: Point Sur Long.

SITE DESCRIPTION:

Sandy beach south of Point Sur. Fine to medium grained sandy beach.

SEASONAL CONCERNS:

Species of concern discussed below are present year round.

RESOURCES OF PRIMARY CONCERN:

Shorebirds and seabirds, including endangered Brown Pelicans and threatened Snowy Plovers.

TRUSTEE AGENCY/MANAGER/LOCAL EXPERTS:

REMARKS:

This Page Intentionally Blank